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FALL 1989

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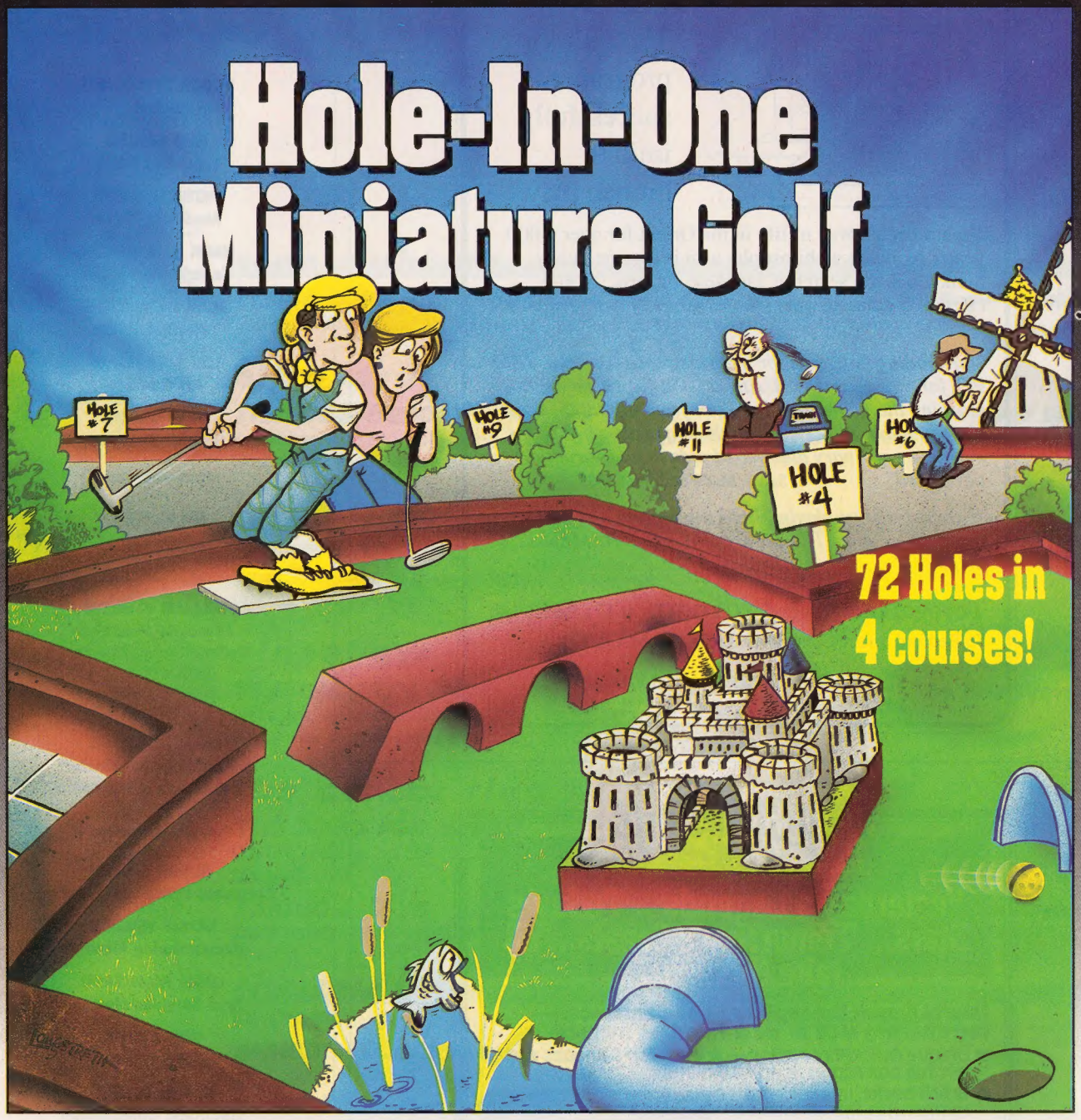

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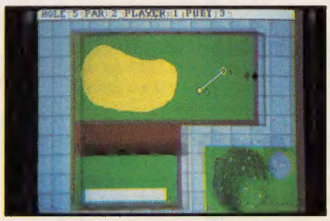

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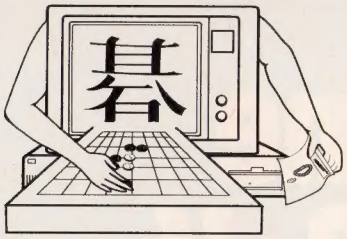

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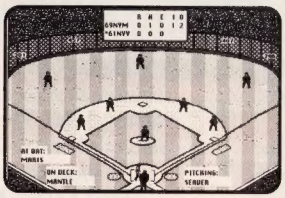

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Fall 1989 Volume 2, No. 3

PCGAMES

THE COMPLETE GUIDE TO MS-DOS ENTERTAINMENT

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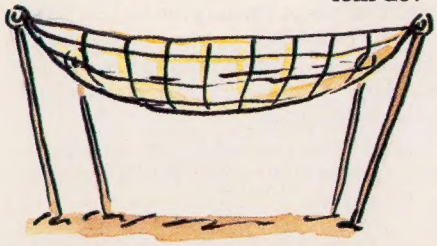

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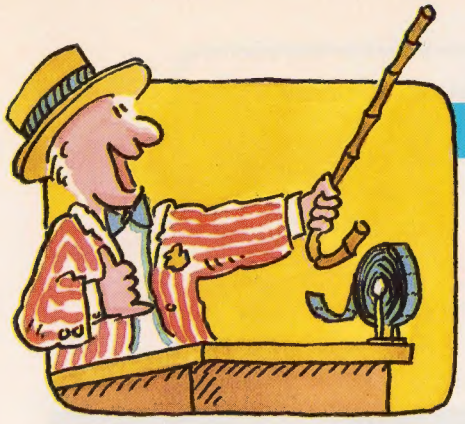

step right up

Thank You Very Much, Tommy Deets

I played my first computer game in 1977, while completing my last two semesters of college. Ah yes, senior year. The game was Atari's *Pong*, and it kept all of us on my dormitory floor fascinated through an entire winter and spring term. In between bouts of rigorous study, of course.

Tommy Deets introduced me to *Pong* as he had previously introduced me to backgammon, Foosball, and the pleasures of a day at the track. Tommy was not the most serious student the world had ever seen, but he did graduate in four years, and he sure was getting A's in the school of life.

Tommy had an admiration for things that were basically simple, yet capable of almost unlimited variation. He had been playing backgammon since the age of three. A simple game that requires a unique combination of skill and luck, backgammon has been played for at least 6,000 years by princes and paupers in every corner of the world. It's easy to learn, yet difficult to master.

He picked up Foosball when he started hanging around bars at age 16 or so, using his innate spatial skills and world-class reflexes to become an absolute monster at the game. Again, a simple back-and-forth game, but one that provides something new with each quarter invested.

Tommy claimed he was born at the track and, to hear him tell it, was a horse player of Roseian proportions. In actuality, he stuck to simple strategies with the occasional trifecta.

Simplicity is a virtue when combined with endless enjoyment: When Tommy lugged his personal air-conditioner up to his room—the only student to have his own AC, of course, and don't ask how he got it—we noted that it had only two buttons: off and supercool. "Why would I need anything else?" he'd ask.

In the world of PC games, things are a bit more complicated than deciding between off and supercool. As computer games have evolved over the years, there have been many roads taken, but all roads start at one of two basic concepts: simple with endless variation, and complex with predetermination. I think most novice game players prefer the simple pleasures of a good kick-and-gouge game, an outer space shoot-'em-up, or maybe a driving simulation.

But a substantial number of people are hooked on finding treasures, solving mysteries, going on adventures, and playing out roles in fantasy settings. Players falling in the latter category tend to become especially fanatic about their gaming pleasures.

In a middle category fall most sports games, especially baseball and golf. The player must know quite a bit about these games' rules, and yet something different happens every time you go out to the ballpark. And as for the limitless shot variation and frustration potential of golf. . . .

At *PCGames*, we cover all the bases (pun intended). In what are still the early days of computer games, especially for MS-DOS computers, we realize that most people don't have unshakable preferences about what games they want to play. You're just looking to have some fun and may prefer anything from an invigorating F-19 assault mission to a civilized stroll with Leisure Suit Larry, depending on what kind of day you've just had. (Make no mistake, this is an adult audience.)

So, with this issue, we continue to provide reviews of all types of computer games, written by people who have specific interests in those fields.

I've often thought computer magazines are very similar to car magazines. Computer magazines talk about the thrill of "test-driving" applications and looking "under the hood" of the hardware, for example.

Our cover story this issue combines the best of both worlds, putting you in the driver's seats of the world's hottest cars. And don't miss the Egress column for a look at a revolutionary new kind of driving simulation.

Submarines are the subject of associate editor Mark Reynolds's attention in this issue, as he takes a look at a roundup of underwater games.

Next, Guy Wright takes you into the more complex world of fantasy role playing.

Sports fans will enjoy Jeff Angus's review of basketball games. Watch as some of the world's greatest athletes invade your PC screen for some "in-your-face disgrace."

For trivia fans, we've got a round-up of the television game show programs, designed to help you pick the best of what's out there.

And if your joystick is earning jeers at the office, turn to Eric Grevstad's discussion of the mouse as an input device. It just might get you some respect.

Of course, there's the usual buyer's guide to new games, and a new feature this time, the Fun House, which gives you the quick skinny on some of the best entertainment software that has come to us in the past few months.

The entire staff of *PCGames* knows that putting out this magazine is a great way to have fun and make a living at the same time. Tommy Deets would surely approve.

I haven't seen Tommy for 12 years, although I've spoken to him on the phone a few times. I think I'll send him this magazine and see what he thinks. It's the least I can do.

Thank you, Tommy, for backgammon, foosball, the track, and of course, for PC games.

—Roger Strukhoff, Editor

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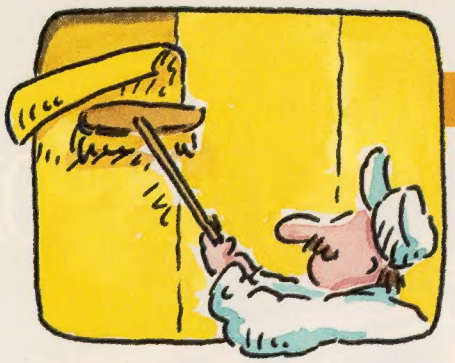

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THE CES

The Consumer Electronics Show is a mammoth trade show sponsored twice yearly by the Consumer Electronics Group of the Electronic Industries Association. This year's Summer CES was held in Chicago's cavernous McCormick Place from June 3 to 6.

If you've never attended one, CES is an amazing experience: more than 1400 exhibitors and several acres of electronic gadgets, gizmos, and gewgaws. All the electronic gaming people—entertainment software publishers, cartridge game publishers, controller manufacturers, game magazines—are arranged in their own little neighborhood around the Nintendo booth, which is easy to find because it's approximately the size of Delaware. It's a very efficient arrangement, much like Disneyland. But in four days you could see and try everything in Disneyland. Not at CES.

The games exhibited at this year's Summer CES were awesome, showing tremendous advances in graphics, animation, and sound from those of just a year ago. Some of these will never make it to market (vaporware); some will make it but will be major disappointments (Kohoutekware); and some will actually turn out to be the blockbuster hits they are all touted to be (wonderware).

But it's too soon to tell. So all I can do is share with you some of the more interesting things I saw at CES. Remember, this is not an all-inclusive list, it's just all that would fit in the space we allowed for it. And the scheduled release dates are the ones the publishers gave me. These dates traditionally have all the accuracy of airline schedules, so don't blame me if they don't come true.

ORIGIN

Origin had four new games ready to roll. *Space Rogue* is a combination 3D space flight simulation and RPG; *Knights of Legend* is a fantasy RPG and the first of a planned series of five modules; *Omega* lets you design and operate a futuristic military cybertank; and *Windwalker*, a sequel to *Moebius*, is a fantasy RPG with martial arts action thrown in.

EPYX

Epyx, as usual, had a ton of products scheduled for fall release. *Snow Strike*, an action/strategy game, lets you play the role of a U.S. fighter pilot sent to destroy the fields, refineries, and ships of South American drug lords. In *Ishido*, players choose from 72 stones which they must match on a board according to color or symbol or both.

Flyton 500 is billed as "the fastest race game in computer software." In it, you race futuristic speedwagons on different types of track while avoiding stun-gun-equipped opponents. *Purple Saturn Day* features an out-of-this-world competition between aliens and earthlings, with events such as Brain Bowler and Time Jump. *Axe of Rage* turns you into an axe-wielding barbarian who must chop his or her way through a host of strange creatures and settings to save humankind.

Devon Aire in the Hidden Diamond Caper should be available for IBM compatibles by year's end. Devon is a cat burglar who must explore every inch of a huge surprise-filled house to find a collection of precious stones.

World Karate Championship has been re-released, after an injunction prohibiting its sale was lifted, and *California Games II* brings you still more sports from the Golden State—bodyboarding, jet skiing, skateboarding, and snowboarding. *Revenge of Defender* is another sequel, this one with seven missions to outlandish worlds.

ADVANTAGE ACE

Strike Force Navigator is a navigational aid that can be used for plane, tank, and ship simulations to help you plot a direct course to any target with pinpoint accuracy. A clear plastic circle six inches in diameter with a handle and a 360-degree compass printed on it, Strike Force Navigator lets you plot intercept courses and eliminate zigzag. All you do is center the device on your vehicle's current position on the map and read off your target's direction, then set the vehicle's heading to that direction.

Strike Force Navigator costs $8.95. For more info, call Edward Moran, president of Advantage Ace, at (313) 677-0732.

REPORT

by Bud Sadler

MicroProse

MicroProse officials held a press conference (attended by Spiderman, Captain America, and Dr. Doom) at which they announced a name change as part of the company's expansion program. The new corporate name is MPS Technologies, which will comprise MicroProse, the traditional marketing division for simulations; Medalist International, a recently formed marketing division for affiliated labels; and MicroProse Games (MPG), which will market the new line of coin-op games.

Product announcements from MicroProse included *M1 Tank Platoon*, a combat simulation of not one but four M1 Abrams battle tanks; *Sword of the Samurai*, a role-playing re-creation of power struggles in feudal Japan; and *F-15 Strike Eagle II*, an updated version of the classic combat flight simulator.

Kyodai Software

Kyodai, a joint venture between 11 Japanese software publishers, announced the August release of *Ancient Land of Ys* and *Murder Club*, to be distributed by Brøderbund. The first combines arcade action with the adventure of a fantasy role-playing game. *Murder Club* is an interactive mystery adventure that lets you be the detective—examining the crime scene, searching police files, questioning witnesses, and making arrests.

Maxis Software

One of the most original and interesting products shown at CES was *SimCity* from Maxis Software, a city simulator that lets you design and build a city from the ground up. As mayor and city planner you can zone the land, balance budgets, install utilities, and control crime, traffic, and pollution. You can even unleash a disaster upon your town just so you can practice recovering from it. As you try to balance population, industry, and commerce, you can see the city grow and change right before your eyes as the urban-modeling simulator built into the program shows you the effects of your planning on the simulated citizens.

If you don't want to start a city from scratch, there are seven pre-built cities you can take over and manage, but each comes with its own problems—floods in Rio de Janeiro, traffic jams in Bern, nuclear meltdowns in Boston, crime in Detroit, firestorms in Hamburg, earthquakes in San Francisco, and Godzilla-like monsters in Tokyo.

The IBM version of *SimCity* was expected to ship in September. It will be distributed by Brøderbund.

Mindscape

Mindscape whipped out four new games that should be available by fall. *Star Trek V: The Final Frontier* and *Gauntlet II* are, as you might have guessed, sequels. *Harley-Davidson: The Road to Sturgis* lets you customize your Hog and compete in biker contests to get to the big annual rally in South Dakota. My pick of the pack would be *Fiendish Freddy's Big Top O' Fun*, which lets you compete in six circus events (knife throwing, juggling, trapeze, human cannonball, high dive, and tightrope walking) with an evil clown trying to thwart you. The graphics and animation make this game look like a lot of fun; whoever designed it needs to have his attic dusted.

Mindscape will also distribute Sega's conversions of some fast-action arcade hits: *After Burner*, an F-14 shoot-'em-up; *Thunder Blade*, a helicopter blow-'em-up; *Shinobi*, a ninja beat-'em-up; *Alien Syndrome*, a space blast-'em-up; *Action Fighter*, a transformer chase-'em-down; and *Out Run*, a car blow-'em-away.

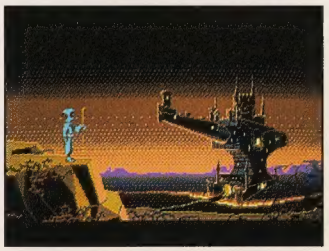
Lucasfilm Games

The highlight of the Lucasfilm Games booth was the showing of two flavors of *Indy*, based on Lucasfilm Ltd.'s movie *Indiana Jones and the Last Crusade*. For those who like lots of action, there's an action game that uses many of the film's best chase and fight sequences. And for those who prefer a more cerebral gaming experience, there's a graphic adventure that let's you try to "out-Indy" Indy.

Lucasfilm also showed a World War II air combat simulator called *Their Finest Hour: The Battle of Britain*, which lets you fly both British and German missions. It incorporates and improves on several of the features used in their previous simulator, *Battlehawks 1942*, such as slo-mo and play-back from multiple angles. The game should be available in September.

And for something really different, Lucasfilm brought out its first fantasy adventure game, *Loom*, whose interface uses neither typed commands nor menu choices but musical notes. By pointing and clicking on sequences of four notes, you cast magic spells that advance your character on his quest.

The *Indy* graphic adventure was scheduled to ship in July; all the other games should be available by September.



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Dynamix

Although Dynamix has been around since 1984, its products have been distributed and marketed by third parties like Electronic Arts and Mediagenic (née Activision). At CES Dynamix announced two new products to be published under its own label as a Mediagenic affiliated publisher.

Tank Killer: A-10 Thunderbolt is a simulation of the low-flying, tank-busting plane known as "the Warthog." The game features six different missions, 26 vehicles and targets, and 256 colors. *David Wolf: Secret Agent* is an "interactive movie" in which you, as an American agent, try to recover the world's most sophisticated stealth fighter from an international crime force. A new "VCR interface" lets you fast-forward through the game, which includes over four megabytes of digitized artwork. Both are scheduled for September release.

ESP Corporation

The product that seemed to attract the most attention in the games section of the show, and the thing that I found most fascinating, was not a computer game at all but an entirely new form of entertainment—a total environment center that lets the player move around inside a fantasy world of the future.

ESP Corporation's display consisted of four simulated cockpits of BattleMechs, giant combat robots similar to the Imperial Walkers seen in *Star Wars: The Empire Strikes Back*. Four players could climb into the cockpits, where they would be divided into two teams and pitted against each other in a five-minute game, with each team trying to destroy the other team's Mechs using the weapons systems built into the pods. Each cockpit was equipped with computers communicating with the others via local area network so that each player's moves are instantly translated into action on the screen for the other players to interpret.

This display is just a forerunner of ESP's plans to develop 150 "BattleTech Centers" across the U.S. and Canada. Each center will have two eight-player games going on at the same time; players can reserve time for teams or just show up and be teamed up with other players as they drop in. A half-hour playing experience will cost about six dollars.

The Centers can also create different environments every 30 minutes by changing software to recreate an undersea world with submarines, a race across the desert, or a futuristic universe with space fighters and anti-gravity tanks. The cockpits' main screen is capable of displaying 200 three-dimensional objects in real time, using up to 64,000 colors at a time.

The first BattleTech Center is scheduled to open in Chicago this winter, according to the company.

Sierra On-Line

Like several other publishers, Sierra On-Line moved to broaden its product line by introducing games outside its area of traditional strength. *Sorcerian* is an RPG from Japan containing 15 separate adventures, and *Hero's Quest* is a fantasy RPG set in the mythical land of Spielburg. *Code Name: Ice Man* is an adventure game with a nuclear submarine simulator thrown in.

Back on the familiar ground of 3-D animated adventures, Sierra had *The Colonel's Bequest*, a murder mystery set in New Orleans in the Roaring 20s, and *Conquests of Camelot*, an Arthurian quest for the Holy Grail.

Sierra also announced *Manhunter: San Francisco*, the post-holocaust follow-up to *Manhunter: New York*. And *Leisure Suit Larry III* brings you the adventures of a distaff Larry, the perennial pushover Passionate Patty.

Data East

The biggest news in the Data East booth was its new line of sports simulation software, MVP Sports, developed in association with Scott Orr, one of the pioneers of sports games. The first title in this line will be *ABC Monday Night Football*, produced under licensing agreement with ABC Sports. Football, basketball, baseball, and auto racing games will follow.

Also announced were IBM versions of *RoboCop*, the action adventure based on the movie of the same name; *Vigilante*, an arcade beat-'em-up set in the alleys of New York; *Super Hang On*, a PC version of the hit arcade motorcycle racing game; and *Heavy Barrel*, in which you must find and assemble the pieces to a powerful superweapon, then blast terrorists with it.

Activision

Activision brought out an MS-DOS version of its award-winning interactive adventure *The Manhole*. Originally introduced for the Macintosh, the program lets the player explore over 150 areas above and below the manhole, without the burden of solving puzzles, collecting points, or defeating enemies. It's delightfully weird.

The company also announced software versions of two hit movies, *Ghostbusters II* and *Die Hard*. In the former, based on last summer's box office smash, action and special effects scenes from the movie provide continuous arcade action as players try to save New York from a second onslaught of ghouls. *Die Hard* is an action game that casts you in the role of an off-duty cop (played by Bruce Willis in the film) who must race the clock to thwart terrorists and rescue hostages.

In the intriguingly titled *Tongue of the FatMan*, players compete in a futuristic form of cockfighting. Humans battle alien lifeforms with various skills and weapons in one-on-one combat for the right to take on the champ, Mondoo the Fat. Smart wagering on the games can bring in cash, which you can use to purchase weapons and potions. I think I'm going to like this one. Look for it in September.

billboard

Accolade

Accolade had seven new products to show off, including a couple of departures from its traditional strongholds of sports and simulations.

Conspiracy: The Deadlock Files is a graphic adventure in which you must try to prove your innocence of involvement in a treasonous plot. The game uses over 500 digitized photos to enhance the realism of the theme as you search the Big Apple for the seven files that will clear you. *The Third Courier* is a role-playing adventure involving high-tech espionage in East and West Berlin. And *Don't Go Alone* is a modern role-playing game in which you put together a team of four ghost hunters and try to solve the mystery of a haunted house.

Meanwhile, back on familiar ground, Accolade showed three new simulation products: *Heat Wave*, an offshore speedboat racing simulation; *The Cycles*, an international Grand Prix motorcycle racing simulation; and *Eye of the Storm*, a Vietnam combat helicopter simulation. *HardBall II* is, of course, the sequel to Accolade's best-selling baseball game spiffed up with league play, instant replay, and a team construction feature.

All titles are expected to be ready before the holiday shopping rush.

Britannica Software

Britannica Software announced a new line of entertainment software called FanFare and two new titles under that label. *Archipelagos* is a 3-D arcade game in which you must free 10,000 archipelagos from alien domination. *Eye of Horus* is another arcade game in which you must avenge the death of your father, King Osiris, by destroying the evil Set.

Both games are from Logotron, a London software company, and will be released in the States this fall.

Electronic Arts

Electronic Arts introduced several MS-DOS games. *John Madden Football* is a detailed simulation of the professional game, with 162 of the famous coach's plays or the Chalkboard, which lets couch coaches call their own. *F-16 Combat Pilot* is a high-tech fighter simulation with squadron rather than single-plane strategy. *Budokan*, a martial arts simulation, lets you master weapons like the bo, kendo, and nunchaku. *Ferrari Formula One* lets you live out the thrill of driving a Ferrari F1/86 at 220 mph on the international circuit.

My personal favorite was *Lakers vs. Celtics and the NBA Playoffs*, featuring five-on-five action using real player stats from 10 playoff teams. The most interesting part is that the players are recognizable, with the distinguishing looks, numbers, hairstyles, and moves of the real NBA stars.

Taito Software

Taito's booth was one of the more colorful in the games area, with members of the staff wearing bright orange pants, neon-colored T-shirts, and shades as part of the company's rap-music-based promotional campaign.

Taito's introductions included *Arkanoid II—The Revenge of Doh*, a sequel to the arcade hit *Arkanoid* in which one or two players must maneuver a spacecraft and break down 67 energy barriers by deflecting multiple energy balls, and *Operation Wolf*, an action-packed arcade conversion in which you are sent in to rescue hostages from heavily-armed terrorists.

IntraCorp

Look! Up on the screen! It's a bird! It's a plane! It's a computer game! It's *Superman: The Man of Steel*, IntraCorp's latest addition to its Capstone line of entertainment software. This arcade action game lets you control Superman and all his powers—flying, heat and telescopic vision, super breath, and super strength—in a race against the clock to save the planet.

Miami-based IntraCorp also showed *Miami Vice*, an arcade-style game based on the former television series. As Crockett and Tubbs, you fight crime the new-fashioned way: with Ferraris, speedboats, and designer clothes.

And the Winner Is . . .

CES wasn't the only gathering of entertainment software people this summer. At the Software Publishers Association Spring symposium and Excellence in Software awards ceremony, held in San Diego May 21–24, Spectrum HoloByte's *Tetris* won the Critics Choice Award for Best Consumer Program. In the Home/Entertainment category, *Tetris* also walked away with Best Entertainment Program, Best Action/Strategy Program, *and* Best Original Game Achievement. Sierra On-Line's *King's Quest IV* took Best Adventure/Fantasy Role-Playing Program, and MicroProse's *F-19 Stealth Fighter* was awarded Best Simulation Program.

The award for Best Sound Achievement in a Non-Music Product went to Cinemaware for the Amiga version of *The Three Stooges*, while Best Graphics Achievement in a Non-Graphics Product was awarded to *Battle Chess* from Interplay Productions.

The award for Best Sports Simulation went to Bethesda Softworks for the Amiga version of *Wayne Gretzky Hockey*, and Best Action/Arcade was awarded to Brøderbund for the Mac's *Shufflepuck Cafe*. Activision's *The Manhole* for the Mac was awarded Best New Use of a Computer. And finally, the ever-popular *Where in Europe is Carmen Sandiego?* from Brøderbund won both Best Home Learning Program and Best Social Studies/Science Program.

Cinemaware

Cinemaware's suite featured several new products from its Spotlight Software label, a line of games designed to complement its "interactive movies" published under the Cinemaware label. Previews included *Deathbringer*, a fantasy role-playing game with a barbarian hero; *Federation*, a space trading adventure with a built-in space flight simulator; *Dark Side*, an arcade adventure set in space; and *Total Eclipse*, an archaeological adventure in which you must solve a pyramid's mystery to save the world from an ancient Egyptian curse.

The MS-DOS versions of these games will be available sometime in the 1980s.

Virgin Mastertronic

Computer incarnations of board games were hot at the Virgin Mastertronic booth, with IBM versions of *Monopoly*, *Risk*, and *Clue Master Detective* in the works under the Leisure Genius label.

The company also announced the signing of three sports celebrities to endorse new titles published under the Melbourne House label: *Orel Hershiser's Strike Zone*, *Rick Davis's World Trophy Soccer*, and *Shark Attack: Greg Norman's Ultimate Golf*. All should be available by the end of the year.

Breaking the Sound Barrier

Access Software is using a digital recording technique to bring the excitement of sound effects, speech, and music to its programs without the expense of a sound board. Called "RealSound," it provides a surprisingly accurate reproduction of sound right on the disk itself, playing through the IBM bleeper. Access is licensing the technology to other software publishers.

I tried it out on their popular golf game *World Class Leader Board*. There were chirping birds, croaking frogs, and the sound of a swinging golf club. When you hole out you can hear the ball rattling in the cup and a polite (or enthusiastic, if merited) smattering of applause from the crowd. Unfortunately, by the time I finished most holes the crowd had gone home.

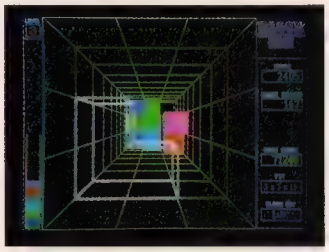
Certain shots also trigger the voice of an announcer saying things like "Looks like he hit the tree, Jim" and "No doubt about it, that's deeply in the sand trap." The voice of the announcer is quite clear if your speaker is mounted in the front of the machine and a little garbled if in the rear. And the commentary is always polite: I expected (and deserved) things like "Looks like he hit the old geezer on the fourth tee, Jim" or "This fool couldn't hit a bull with a banjo, Jim."

But seriously, folks, RealSound is an interesting concept that presents all kinds of possibilities to software developers. You won't get the full orchestral sound achievable with an add-in sound board, but with the money you can save on the cost of a board, you could buy yourself a few extra games.

Looks like a great idea, Jim.

California Dreams

In a booth decorated like a 1950s diner, California Dreams was showing *Hot Rod*, which lets you customize and equip a hot rod and race it against the fastest driver in town. There are 25 cars, more than 35 performance parts, five paint jobs, and other options to choose from, with additional data disks planned. Also announced was *Block Out*, a game of arranging falling blocks into solid layers, which sounds a lot like a certain Russian game I won't mention, but with much more variability—there are nearly 1000 combinations of pit dimensions and block sets possible.



Brøderbund Software

Brøderbund brought out the fourth installment of the Sandiego Saga with *Where in Time Is Carmen Sandiego?*. This time the international thief and her gang use a time machine to go back to the past, and you go after her. The company hopes that this chapter will help teach history the way the other *Carmen* adventures have been used to teach geography.

Licence to Kill is based on the latest James Bond film and puts you in the role of the secret agent, fighting a ruthless drug lord on land, sea, and in the air. The game is published in the U.K. by Domark and will be distributed in the U.S. by Brøderbund.

Galaxy of Games

The Galaxy of Electronic Games will make its debut November 17–19 at the San Jose Convention Center.

More than 300 computer games and videogames will be on display at the show, and popular game characters will appear in real life on the floor.

PCGames and its sister publication, *GamePro*, which covers Nintendo, Atari, and Sega cartridge games, will be among the exhibitors at the show.

Other exhibitors will include software publishers, videogame developers, computer manufacturers, as well as joystick and monitor manufacturers. The latest hand-held cartridge systems, plus new 16-bit home entertainment systems will be on display.

A highlight of the show will be a 2,500-square-foot arcade area, featuring an assortment of computers loaded with games. Attendees will be able to sample any or all of the games.

Show hours will be from 2 pm to 7 pm on Friday, November 17, and from 10 am to 6 pm on Saturday and Sunday. Admission will be $6 per person, with group discounts available.

The Galaxy of Electronic Games is being produced by Pinnacle Productions, located in San Francisco. For further information call (415) 346-4281.

SPEECH, SPEECH!

Think of the games you could play if you could talk with your computer.

by Rich Heimlich

Just imagine: a computer that can talk back. It's a product that has been foretold and anticipated since humans first envisioned the computer. It has been written about and seen in countless books and movies, but a "talking" computer like HAL in *2001: A Space Odyssey* is still a long way from reality.

This is not to say our computers are mute. We are seeing a trend toward all sorts of sophisticated sound alternatives, both alternatives that let your computer speak and ones that help it respond to your words. In fact, the PC has never sounded better, and companies aiming to make the PC speak are not dragging their feet; they can't afford to, considering the many music and special-effects products now entering the market. So maybe, just maybe, you can start looking forward to the day when you can forget all those complicated commands and just *tell* Leisure Suit Larry to perform.

The evolution of talking computers began primarily to help the handicapped, most notably the visually handicapped, to use computers. At the same time, they were being used in some specialized schools, helping children use the computer's educational potential without learning complicated commands. Speech synthesis has developed and become more sophisticated in these environments. The once complex and expensive technology required to allow synthesis is largely a part of the past. Developers are now aiming at more common applications, to make talking computers more widely available. And that promises an exciting future for game players.

There are basically three realms of speech available to your computer. The ability to speak to a computer and have it actually speak back encompasses two of these areas. The first, *voice recognition*, is the most complex. Voice recognition requires a recording of a voice pattern for specific commands and then a definition of how to respond to that voice pattern. For example, with the aid of a microphone you can train your computer to understand and execute the MS-DOS command DIR when you say the word "Directory." Once the computer has a copy of your voice pattern, you type in DIR. The next time you say the word "Directory," the computer recognizes it as the command DIR and shows you a list of files and subdirectories.

Imagine the possibilities with entertainment software. You could ask the characters in your favorite adventure to walk, ask questions, and pick up objects. You could fly your F-16 by voice with commands like "Pull up," "Brake," and "Fire." You could train the computer one time and then put the game reference card away, since you will never need to remember the actual keystrokes. I was able to get my Covox Voice Master to interface with *688 Attack Sub* and provide an incredible simulation since I no longer had to break the gaming flow to consult the manual for a particular key combination. The fluidity of execution possible with voice recognition must be experienced to be appreciated.

Unfortunately, voice recognition is not without its problems. Your voice pattern is the biggest one. A voice pattern is somewhat like a fingerprint—no two patterns are exactly alike. Each pattern differs depending on pitch, tone, and emphasis. Your pattern even changes when you repeat the same word. Getting the computer to recognize these patterns as the same word is a tedious task. This problem is further compounded when someone else uses your computer. Though a particular application may be speech trained, it is trained in your voice. Another person's voice patterns would be entirely different, therefore requiring a complete retraining of that application for the new user. Voice recognition allows for this with templates and macros for each user, but training and retraining is still

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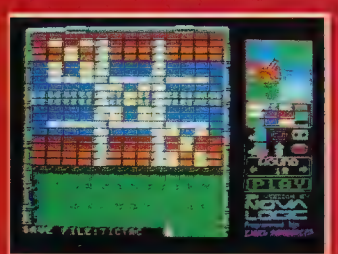

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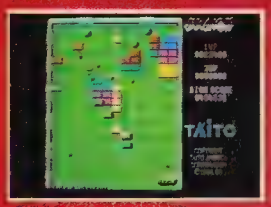

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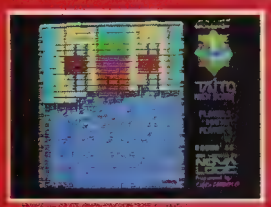

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a time-consuming process.

Another problem with voice recognition is keyboard emulation. When you instruct the computer to respond to your voice with keystroke commands, you are emulating or imitating the keyboard. This is not a problem with most productivity programs like word processors or spreadsheets. Entertainment software, however, poses a problem, since many game developers use their own special programming techniques. In other words, you tell your computer that when you say the letter "S," you want it to type the letter S on the screen. Game programmers sometimes change the values of keys so that even though your computer listened to you and typed an S, the program did not understand it as an S. They make these changes in the name of speed: in order to get the best graphics at the fastest speeds, game programmers replace the system's normally slow keyboard-control software with an optimized version to make the game respond more quickly. Unfortunately, there is no way to know in advance which games will present these problems—you have to try voice recognition and find out.

The second level of speech in computers is *speech synthesis*. A synthesizer generally reads typed words and speaks them back to you. This is a great way to help the visually handicapped and would also work well in the gaming environment. Imagine how much more appealing a game would be if it actually spoke to you. But speech synthesis has not yet caught on for general use, due to a few interesting problems. First, our language is made up of phonetics. Phonemes dictate the way a word sounds. For instance, should the word "read" be pronounced "red" or "reed"?

It's not easy for the computer to decide, so many synthesizers rely on a

SPEAKING OF COMPUTERS . . .

While there are quite a few products available to make your computer speak, only two companies, Hearsay and Covox, currently have cost-effective systems for the average computer user. Since price is always an important factor, here's an overview of the choices you'll get from these two.

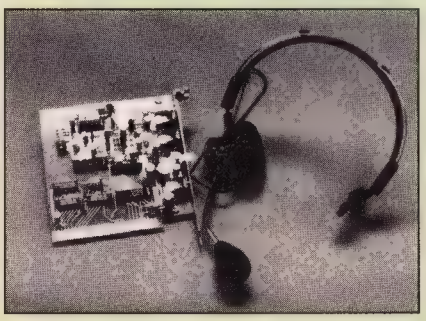
The Hearsay 1000 ($149) is a voice-recognition system, with a speech synthesizer combined on the same board. A headset is currently available only as an option, but it should be a standard feature by October, when the company plans to release a new version. The software works on a keyboard macro theory; you can assign up to 64 voice commands or macros to each application, which is, for most uses, more than enough. I found the Hearsay 1000 very competent at learning voice commands, although it didn't work quite as well as the company claims. While the manual boasts of a 95 percent accuracy rate, I found it was more like 85 percent accurate, which is still more than acceptable. The Hearsay 1000 includes programs to allow the speech synthesizer to read ASCII text back to you. You can also configure the system to read back the on-screen words as you type them. Additionally, when you encounter words the system can't pronounce correctly, you can add them to an exceptions dictionary, thus reducing future mistakes.

The Hearsay 1000's most appealing feature is its combination of the recognition and synthesis cards in one unit. This does, however, have one drawback. In order to run either application, you must load the software for both, wasting memory and leaving little for other applications. Hearsay is planning a new release that will separate the recognition software from the synthesis software. Presently, your only alternative to this problem is to use the older and less capable version of Hearsay's software, which splits up the two functions. Fortunately, these older versions are included with the package.

Covox produces several speech hardware/software packages, starting with the Voice Master voice-recognition system ($149.95). The package comes with the board, software, manual, and a headset. The Voice Master is very much like the Hearsay 1000 in its approach to training your voice macros. It allows up to 256 commands per application, but these must be broken down into blocks of 16 commands via macro linking, which can be confusing on larger applications.

There are two principal differences between the Voice Master

The Hearsay 1000



The Voice Master

phonetic alphabet to dictate pronunciation. So, in order to be read, a document would have to be converted to phonetics first, which usually look nothing like the words they represent. And that means accuracy can suffer in the translation. Also, even with the correct phonetic conversion, synthesizers just don't sound very human. Most, especially those in the lower end of the price range, are limited to a very monotonous-sounding computerized voice with no hint of gender or accent.

The final level of computerized speech, and the only one currently accessible to most of us, is *digital recording*. This technology allows the programmer to record a voice or sound effect and replay it as it actually sounded. This could be handy in many games to provide human-sounding speech or realistic sound effects; in fact, it is found frequently in software for computers like the Amiga and the Apple IIGS. Digital recording has only minor drawbacks. You cannot alter the speech as you can with a synthesizer; what you record is what you get. These recordings also take up more disk space and memory than other methods mentioned. It is, however, the most popular choice right now with game programmers working with systems other than MS-DOS.

Your computer is struggling to speak out, but there are still many pitfalls to be overcome before interactive computers are part of everyday life. The next time you see *Star Trek* or *2001* and watch someone talking freely with the onboard computer system, you'll realize just how far we have to progress before a computer that can talk back is a technological fact and not a screenwriter's fiction. □

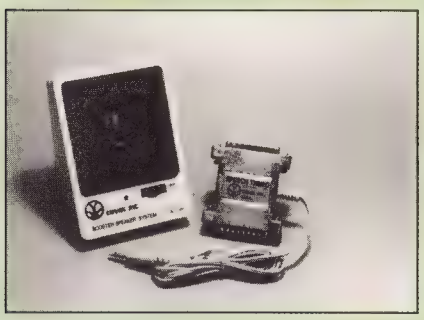
Rich Heimlich is the president of TSCS Inc., a quality assurance testing firm. The views expressed are his own.

and the Hearsay 1000. The Voice Master does not include a speech synthesizer as the Hearsay 1000 does. The Hearsay software, however, requires over 200K of memory, as opposed to the Voice Master's nominal 60K. While I was more comfortable with the Voice Master's interface than with Hearsay's, I wouldn't characterize it as a painless one. Commands are hard to find and harder to completely understand—the manual is among the worst I have found for any software package. Its small memory requirement is the Voice Master's biggest redeeming quality. In addition, it's a little better at recognizing spoken words.

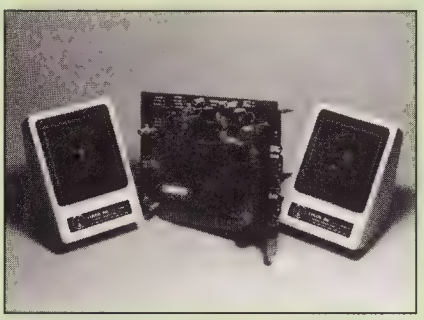
Covox marketed the Speech Thing ($69.95) as an alternative to the PC's useless built-in speaker. It allows supporting software to produce digital sound, which is played through a supplied speaker connected to a unit placed on the computer's printer port. Used with the company's Smooth Talker program, the Speech Thing can produce speech from text and documents. If you own a Voice Master, you can record your speech, music, or any sound effect you want, and play it back through the Speech Thing. The documentation is a bit skimpy, but using the Speech Thing is generally straightforward and easy. If a speech synthesizer is all you need, the Speech Thing is a good choice.

Covox also produces the Sound Master PC ($89.95). The Sound Master bridges the gap between voiceless music boards and voice systems that produce music. It is an excellent system for game players. It uses the same kind of sound chip found on the Atari ST, one that produces very high quality sound. The Sound Master can produce voice, music, and digital sound effects. Through its DMA chip, the Sound Master can produce sounds without having to pause the action on the screen, as so many other similar systems do.

The Sound Master also comes with two ports for digital joysticks, like the widely available Atari type. The only limitation here is that programs must be written to directly support these joystick ports. Only time will tell if developers like what the Sound Master has to offer, but already several products are being developed or updated to support it.



The Speech Thing



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PLAYING WITH MICE

Mice may be designed to keep you hard at work arranging pages and manipulating data, but they are also handy when you need to take a break.

by Eric Grevstad

Let's face it: You may be the hardest worker and most productive employee in the office, but if your boss sees a joystick on your desk you might as well come to work wearing your Captain Astro propeller beanie. Joysticks are great, as are the games you can play with them, but they just don't look . . . well, very grown-up.

A mouse, on the other hand, is a status symbol. To the boss, a mouse—the palm-sized, button-topped gadget found next to many computer keyboards—is the key to modern software such as PageMaker or Excel. To you, it's the best way to play a growing number of PC games—an input device that gives better control than a joystick, as well as working with a new generation of business programs.

Why are more and more games adding rodent control as well as keyboard or joystick operation? While a joystick is still the best way to perform certain arcade-game maneuvers, a mouse has several advantages. For instance, most PCs don't have game ports built in; you must fill one of your system's expansion slots with a joystick adapter card. Some mice use adapter cards, but most plug into serial ports, which are standard equipment on most computers. And you don't need to calibrate a mouse or adjust its alignment before play, as you do a joystick.

Mice come in different shapes and styles, with a variety of features that can confuse the novice shopper. Let's take a quick course in mouse science before sampling some mouse-controlled games.

A Trackball in Its Tummy

Like a joystick, a mouse is a pointing device; moving the mouse around your desk moves a cursor or character around your PC's screen. Clicking a button on the mouse's top, like pushing the fire button on a joystick, executes a program function, such as launching a missile or picking an item from a menu.

Most mice work like upside-down trackballs: The mouse rolls about on a ball mounted in its underside. In *mechanical* mice, the rotating ball spins two rollers mounted at right angles to one another. These generate electrical signals that track the mouse's horizontal and vertical motion, so the computer can change the cursor's position on the screen. *Optomechanical* mice work the same way, except their rollers activate optical encoders—light-emitting diodes and photodiodes—to send the electrical impulses to your PC.

Since desks get dusty, both mechanical and optomechanical mice need occasional maintenance (a tough job: remove ball, blow out dust, maybe swab around with a Q-Tip). *Optical* mice replace the rolling ball with photosensors that watch the mouse's movement across a special reflective pad containing a tiny grid of *x*- and *y*-coordinate lines. An optical mouse is maintenance-free but must stay on its pad; it won't work on your bare desktop.

Having learned all that, you can forget it; mechanical, optical, and optomechanical mice work equally well for all practical purposes. But all mice, whether they use a special pad or empty space, need room to maneuver. (Most people move a mouse ten inches to one side by moving it five inches, picking it up, putting it back down at the starting point, and moving it five inches again.) If your desk is crowded, you may want to consider a mouse's *resolution*, or the ratio between on-desk and on-screen movement.

The usual standard is 200 dots per inch (dpi), meaning that the pointer moves by 200 dots or pixels on your display when the mouse moves an inch. Newer "high-resolution" mice offer 300 to 400 dpi, or even more via a feature called *ballistic* or *dynamic tracking*. This accelerates pointer motion along with mouse speed, so a quick movement has a greater effect than a gradual one of the same distance.

However, while these high-tech options are great for precise drafting or

desktop publishing, they're not really important for playing games. Indeed, while playing one game with the MSC mouse, I had to turn dynamic tracking off—I was making sudden moves, hurrying to shoot the bad guys before they shot me, and kept flying past them.

You'll also notice that, while most mice have two buttons, several manufacturers (led by Logitech) offer three. The third button is a bonus supported by a few programs, but virtually all mouse-compatible software works fine with two buttons—many programs, following the Macintosh example, use just one.

Rating the Rodents

If neither design type nor resolution makes a big difference, does that mean that all mice are created equal? Well, no. Your buying decision will depend on several factors. One, of course, is price. A top-quality mouse costs $120 to $150, depending on the software that's bundled with it (usually a paint program or mouse menus for popular programs such as Lotus 1-2-3). Some bargain models are under $100.

You must also decide, before you buy, how to connect your mouse to your computer, unless you have an IBM PS/2 or other new machine with a built-in mouse port. *Serial mice* plug into an RS-232 serial port; if you have the common configuration of two serial ports with COM1 used for a modem, your mouse occupies COM2. If communications devices or serial printers leave you without a port to spare, you'll have to buy a *bus mouse*, which connects to a card plugged into one of your PC's expansion slots.

All mice come with a *mouse driver*, a memory-resident program that lets your PC recognize the mouse as an input device. You load some mouse drivers from the DOS command line (or as part of your AUTOEXEC.BAT file at startup); others require a change in the CONFIG.SYS file on your boot disk. Either way, installation is a simple, one-time procedure.

The most important factors in mouse shopping are subjective—how a mouse feels in your hand, how easy it is to use. Microsoft's sleek, smooth-moving mechanical mouse ($150), nicknamed the "Dove bar," is the standard by which mice are judged. By its side, IBM's PS/2 mouse ($99) is an uncomfortable clunker.

Usually a Microsoft mouser, I borrowed two rival mice from the *PCGames* office. At first, MSC's PC Mouse II ($149) felt a bit sluggish compared to rolling-ball mice, its optical design causing a minute amount of friction as the mouse slid across its special pad. But I soon adjusted to the mouse's gliding motion, comfortable shape, and light but firm buttons, and MSC's versatile mouse software gets top marks.

By contrast, the optomechanical Electronic Arts Mouse ($149) impressed me as the easiest roller I've ever seen, thanks to its silicone-coated ball and Teflon runners. But its boxy profile didn't fit my hand well, and it has irritatingly stiff and loud buttons. While perfectly capable, it felt like a low-rent model, meant mainly for bundling with EA's accompanying DeluxePaint II software.

Just Mousing Around

What sort of games benefit from mouse control instead of joystick control? After picking half a dozen mouse-compatible game packages from *PCGames'* buyer's guide pages, I've arrived at a general conclusion: While a joystick may be best for moving in a *direction*, nothing beats a mouse for moving to a *position*.

For steering a Ferrari through Accolade's *Test Drive* or skiing a slalom run in Brøderbund's *Downhill Challenge*, a joystick gives the best back-and-forth response—now this way, now that way, in a swooping, steady motion. But try a joystick in Actionware's *Capone*, which challenges you to take aim at a shooting gallery of machine-gunning mobsters, and you'll find your gunsight wavers and wobbles all over the lot. It's far easier to manage steady sniper fire with a mouse—move the crosshairs to that fedora appearing in the window, click the button, and blow the thug away. This precise mouse control helps make *Capone* seem like more than just a simple shoot-'em-up.

Similarly, chess is a game of taking planned positions instead of careening around obstacles; Interplay's *Battle Chess* lets you use a mouse to click on a piece and move it into position. Such control is nothing fancy, merely more convenient than using a joystick or keyboard arrows, and I can't play chess anyway—even novice-level programs look out through the screen, see me, and cry, "Breakfast!" But *Battle Chess* is as cute as it is challenging: Its animated pieces slaughter each other in medieval homage to the movie *Star Wars'* holographic chess game, with slapstick battles straight out of *Monty Python and the Holy Grail* and winged cherubs holding up the command menus.

Moving a knight to King's Five is one example of moving to a particular location, but exploring various locations is the whole point of one category of games: graphic adventures, such as Sierra On-Line's epic *King's Quest IV: The Perils of Rosella* and the not-so-epic *Leisure Suit Larry*

Goes Looking For Love (In Several Wrong Places). The former is the latest, most lavish nine-disk legend in Roberta Williams's mythical series; the latter is a new, more sophisticated romp with that hapless bachelor Larry.

The Sierra adventures feature great graphics, splendid stereo music (or raucous, screeching beeps, depending on whether you use an add-in music card or the PC's own low-fi speaker), and effortless mouse control: Point to a road, door, or barstool and Rosella or Larry walks there. Both are a bit fussy about characters being exactly lined up with doorways or obstacles; I often sent Larry strolling into a lamppost or Rosella tumbling down stairs. But both are great games, the best yet in their respective series. The mouse just makes them a bit simpler and more enjoyable.

THE UPSIDE-DOWN MOUSE

As more and more games come out that support joysticks and mice, game players shouldn't forget that there's a third useful pointing device: the trackball. Perhaps best known for its use in radar tracking systems, the trackball first became famous in arcades for its devastating role in coin-op games like *Centipede*.

Trackballs come in various sizes, shapes, and prices, but basically they are boxes that sit on your desk and connect to your PC via the serial port—just like a mouse. The difference is that you move a mouse across your desktop, causing a marble-sized ball set in the underside to roll. This rotates two electronic potentiometers, one for the *x* and one for the *y* coordinate. The software that you're running translates these signals into cursor movement. With a trackball, you move a much larger ball with your fingers or palm—with the same effect. As far as the computer is concerned, a mouse and a trackball are identical.

Also like a mouse, trackballs may have one, two, or three buttons, depending on which type of mouse it electronically emulates (usually the Microsoft serial mouse). These buttons act just like the buttons on the mouse.

The chief advantage of trackballs is that you don't have to have a lot of uncluttered desk space. Mice, on the other hand, require a good deal of real estate. They also require a surface with the right texture in order to roll efficiently. A trackball will work anywhere, and since it doesn't move, you can place it next to your keyboard and not worry about the piles of paper strewn about. Laptop users can sit with their computers on a carpeted floor or a couch, or even take their machines to bed with them, and still have all the convenience of a mouse without the inconvenience of searching for a hard flat surface to roll it on.

Other advantages are that trackballs are less likely to collect dirt from the work surface, so they require less cleaning and maintenance. And because you operate the trackball with your fingertips or the palm of your hand instead of your entire arm, you'll have less fatigue at the end of a session of heavy use.

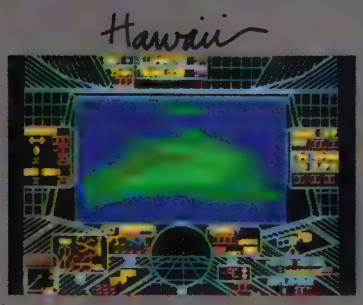
The down side, of course, is that many people are accustomed to using mice. That makes a trackball a little hard to get used to. Subtle or slight quick movements can be difficult with a trackball; for some games, that lack of smooth motion might be undesirable.

It's also difficult to move a trackball in a perfectly straight line, or to trace an object on paper. I've known people who can sign their name with a paint program using a mouse; forget doing that with a trackball, unless you've had a lot of practice. Another difficulty is moving the trackball while holding down a button—the familiar "drag" operation performed with many mice.

Don't let these negative comments get you down. A trackball isn't for everyone and certainly has its disadvantages. But where space is a premium, it can't be beat.

I wouldn't recommend that you go out and buy a trackball to use for computer gaming. But if you're involved in one of the traditional areas of trackball use, such as CAD/CAM/CAE or robotics (I personally use the RB2/CAD-6 Trackerball from Marconi Electronic Devices Ltd., shown above, for my hobby, rocket science), try using your trusty trackball as a pointing device in some games designed for a mouse. You may be pleasantly surprised with the results.

—Alan L. Zeichick



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POINT-AND-CLICK PASTIMES

Lucasfilm Games' cartoon adventures, *Maniac Mansion* and *Zak McKracken and the Alien Mindbenders*, take the mouse interface a step further. Not only can you click on part of a scene to move a character there, but you never need to type commands such as "Take flashlight." Instead, you point to a verb from an on-screen list, then at the item it applies to. The games are fun, but I actually prefer typing a few words occasionally, as in the Sierra games—moving the mouse to make Zak walk across the room is great, but I can type "Open door" quicker than I can click on "Open," then click on the door. Inexperienced typists, however, will find this useful.

Perhaps the most effective mouse-users of all are Mindscape's ex-Macintosh trio, *Deja Vu*, *Uninvited*, and *Shadowgate*. These games' displays show mean streets and haunted houses from your adventurer's point of view, so you don't move a character about the screen as Sierra and Lucasfilm players do. But you can drag and double-click the mouse to manipulate nearly every item you see on screen—opening a mailbox, moving a torch from a wall bracket to your "inventory" window, and so on. Having a mouse makes these games more fun.

All of these games seem to involve rather specialized control, moving a character to a particular location or zooming in on a particular object. Is it possible to use the mouse for good clean fun? Yes, if you play Electronic Arts' *Zany Golf*.

Zany Golf is challenging (or frustrating) because it's an arcade game, not a real miniature golf simulation—instead of letting you play all nine holes and finish way over par, the game ends when you use up your allotted strokes. But the mouse makes a superb putter: Hold down the button, pull back rubber-band fashion to set the force and angle of your stroke, and let go. And the holes are surrealistically wild, with obstacles ranging from spinning windmills to bouncing hamburgers.

With games like these, you'll soon learn that a mouse isn't just for Ventura Publisher or PC Paintbrush. Indeed, a discussion of mouse games wouldn't be complete without mentioning the solitaire strategy game *Reversi*, a simple yet addictive capture-the-board challenge. *Reversi* is a little overpriced at $99, but it does come with half a dozen free business applications and a DOS manager. The combination is called Microsoft Windows. □

Eric Grevstad is a writer and contributing editor for PCResource, inCider, *and several other magazines. He can usually beat* Battle Chess *if he sets up the board first so the computer has only two pawns and a king.*

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THE NEED FOR SPEED

Some of the great hits of the sixties were songs that glorified hot cars and fast driving: "Little Deuce Coupe," "Dead Man's Curve," "Shutdown," "Little GTO," and many more. You'd hear these tunes on your car radio and the next thing you knew you'd be driving twenty miles an hour over the speed limit.

These were the songs most of us grew up listening to, and the allure of driving slick cars at great rates of speed was, well, driven into our minds. Some people satisfy their need for speed by actually buying hot cars and actually driving them fast. But for those of us without the money, nerve, or inclination to do this, there are some great driving games available—with them we can experience the thrill of high velocity without the accompanying risks of detainment, dismemberment, or death. Let's face it, we're talking cars for the cautious here.

And what's wrong with that? There are games that let you test your driving skill and reflexes on city streets, on winding highways, in foreign countries, and on exotic race tracks. Now how else could you get such a variety of driving experiences, especially without having to leave your home or office?

If you have driving ambitions, there's sure to be a program that will suit your tastes. So fasten your seat belts and let's take some of the latest models of automobile software for a test cruise.

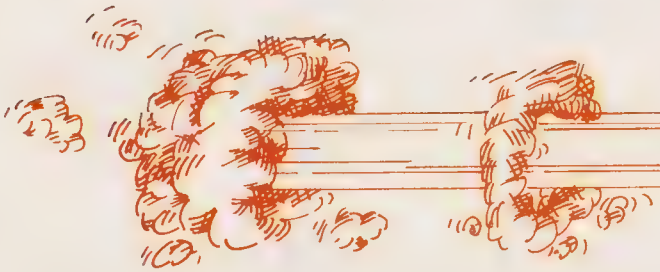
Through the Windshield

The games we reviewed can be divided into two main categories: driving simulations and arcade-type driving games. This is a somewhat fine-line distinction, because even the most serious driving simulations have an arcade element, in that they are ultimately a test of your reflexes and eye/hand coordination. The difference to us is that driving simulations attempt to duplicate the look and feel of operating a real car by providing a driver's-eye view of the action as seen through the windshield and by simulating the interior of the vehicle and its performance characteristics.

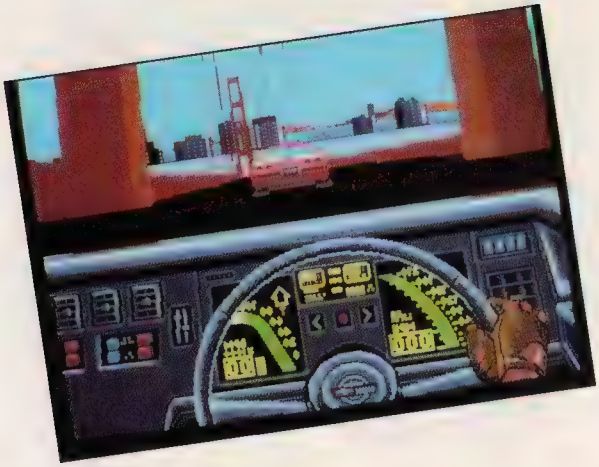
The arcades, on the other hand, show you the action from behind the car. Also, the arcade games put you in a series of run-and-shoot situations, whereas the simulations provide a little more food for thought by including strategy elements like which vehicle to choose and how to equip it, and driving decisions like what route to take. We'll begin our survey by first looking at the driving simulations.

THE SIMULATIONS

Of the simulators reviewed here, the most elaborate simulator is ***The Duel: Test Drive II*** (512K, HGC/CGA/T16/EGA/MCGA, $44.95) from Accolade. This new and improved version of the popular *Test Drive* package lets you drive a winding stretch of highway, complete with tunnels, steep cliffs, and long straightaways, in your choice of a Ferrari F40 or a Porsche 959. An optional car disk called *The Supercars* ($19.95) expands the menu to include the Lotus Turbo Esprit, Ferrari Testarossa, Porsche 911 RUF, Lamborghini Countach 5000S, and Corvette ZR1. In addition, you can get the optional *California Challenge* scenery disk ($19.95), which provides a scale model of the trip down the coast from the Oregon line to the Mexican border.



The Duel: Test Drive II



Vette!

You can race the clock or a computer-controlled driver, while trying to avoid obstacles in the road that damage your vehicle, traffic in both directions, and visits from the law. There are 12 difficulty levels that affect variables like your opponent's speed, density and speed of traffic, and autoshifting. Crashes in *The Duel* are the most spectacular of the games in this group, with a splintered windshield to let you know you've just lost one of your five lives.

Police are everywhere, and even though your cars are outfitted with radar detectors, sooner or later you're going to hear a siren or run into a roadblock. You can pull over and take your ticket or try to outrun the law. If you pull over, a speeding citation appears on your windshield, there's a 20-second penalty added to your time, and then you're on the road again. There's no penalty for trying to outrun the smokies, so you might as well give it a shot, but if you crash and lose a life it's not really worth the risk, unless you're near the end of a leg and can spare the life. If you try to pass a police car, you'll rear-end it and lose all your lives.

A joystick is optional and would usually be recommended in this type of game. However, I had some serious problems with joystick calibration that took a lot of the fun out of driving. The calibration seemed to drift, usually along the *x* axis, and by the time I got to the starting line, the center point on the steering wheel might be as much as 90 degrees out of true. I ended up fighting to keep the car on the road and got caught up in massive oversteering situations. This didn't happen every time, but enough to be annoying.

Accolade tech support said the problem may be that I was using DOS 4.0. Actually, playing with the keyboard is not as difficult as you would think; at least you can stay on the road.

Beyond that, I loved the game. The graphics and animation are excellent, and the sensations of speed and cornering are great. Unfortunately, *The Duel* does not really bring across the sensation of climbing or descending hills; this lack is especially noticeable if you're familiar with the stretch of highway simulated on the *California Challenge* disk.

Although the sound effects are pretty good, the theme music is enough to give you nightmares. I wish Accolade had added sound board support; they could have done a better job of simulating the total driving experience with more realistic sounds of screeching tires, squealing brakes, sirens, and engine noise, not to mention better music.

By the Bay

True Friscophiles are going to love Spectrum HoloByte's ***Vette!*** (512K for CGA/HGC, 640K for EGA, $49.95), in which you race a Corvette through the streets of San Francisco, trying to beat a computer-controlled opponent in a foreign sports car. Head-to-head play is also possible directly via a null-modem cable, a serial cable with a null-modem adapter, or remotely with a modem.

You get your choice of the 1989 stock Corvette, the ZR1 "King of the Hill" Corvette, the Callaway "Twin Turbo" Corvette, or the Callaway "Sledgehammer" Corvette. Your opponent can drive a Lamborghini Countach, Porsche 928S4, Ferrari Testarossa, or Ferrari F40. The cars

Lombard RAC Rally

Grand Prix Circuit

have accurate performance characteristics, and you can set the skill level to trainee, rookie, or pro. Your opponent's skill level will be adjusted to match your own.

At the Rookie and Pro levels, the police will pull you over for traffic violations. If the charge is speeding, reckless driving, or a moving violation, you can offer excuses such as "My spouse is in the hospital with an emergency," "I am late for my son's birthday party," or "My accelerator was stuck." I tried "Sorry, but I needed to find a bathroom, badly," and got "OK, just don't let it happen again." Excuses won't work if you're bagged for evading arrest or vehicular manslaughter, but the penalty is only 15 seconds tacked on to your time (and the time it takes to write the ticket).

There are four courses: San Francisco Zoo to Golden Gate Bridge; Golden Gate Bridge to Bay Bridge; Bay Bridge to San Francisco Zoo; and a circuit that combines the first three courses. You'll go past such famous landmarks as Coit Tower, the Transamerica Building, the Presidio, Fisherman's Wharf, and Chinatown. Of course, it wouldn't be a San Francisco simulation without hills, and there are plenty of them, so you can re-enact the chase scenes from dozens of movies and TV shows, if you know the route.

This is city driving at its best (or worst). No tooling along a country road here; you've got to be on the lookout for pedestrians, trucks, cars, buses, cops, stoplights, one-way streets, dead ends—all the things that make big-city driving the adventure that it is. Crashes are not as interesting as in some of the other driving simulations, but they do cause damage at the higher skill levels, forcing you to find a gas station to get repairs.

Finding your way around town and choosing the optimum route are key to winning the race. To help you, there are two city maps included with the package. In addition, an on-board navigational map can be called up with the push of an H key to show you the current location of your car and your opponent's, with compass heading indicated. The traffic control icon area of the dashboard shows the speed limit on the street you're on, the sign at the approaching intersection (stop, yield, or light), any restrictions at the upcoming intersection (no left/right/U turns, do not enter), and the status of the upcoming cross street (one-way, two-way, curve). The name of the street you're on and the name of the coming cross street are also displayed. Wise use of all this information can make the difference between a victory party on Lombard Street and a trip back to the garage.

The 3-D solid modeling graphics and detailed mapping of streets and landmarks make for a game that is as interesting to look at as it is fun to play. The buildings themselves are monotonous monoliths as seen from the ground, but the program features a Tour mode and an adjustable helicopter view that let you take a good look at and around the landmarks.

You can drive your Vette with a joystick, mouse, or keyboard. I found myself using the joystick to drive, the mouse to make menu selections, and the keyboard for single-letter com-

RATINGS

The* PCGames *rating system evaluates games on a scale of 1 (lowest) to 5 (highest) for five attributes:

Playability—evaluates the game's entertainment level and user-friendliness.
Graphics—indicates the sophistication of the game in its art, animation, background, and creative use of color.
Action—shows the intensity of the action in the game, an estimate of on-screen activity level per unit of time.
Strategy—measures the degree of brainwork required to play the game.
Value—balances the total of these attributes against the price of the game, a ratio of fun units to dollars.

	The Duel: Test Drive II	Vette!	Lombard RAC Rally	Grand Prix Circuit
Playability	✔✔✔✔	✔✔✔✔	✔✔✔✔	✔✔✔✔
Graphics	✔✔✔✔✔	✔✔✔✔✔	✔✔✔✔	✔✔✔✔✔
Action	✔✔✔✔✔	✔✔✔✔✔	✔✔✔✔✔	✔✔✔✔✔
Strategy	✔✔✔	✔✔✔✔	✔✔✔	✔✔✔
Value	✔✔✔✔✔	✔✔✔✔✔	✔✔✔✔	✔✔✔✔

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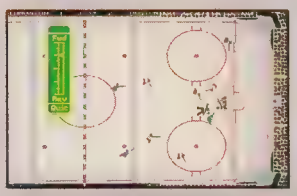

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mands. This is a matter of personal preference; your mileage may vary. If a cluttered desk bothers you, go with the keyboard all the way.

Don't even bother trying the EGA version on a 4.77-MHz machine because the game will run at about the speed of continental drift. Turning off the rear view mirror and the front dash will speed things up a bit, but if you want EGA, you'd better have an 80286 or 80386, or an accelerator card.

Off the Track

If you want to drive somewhere other than California, try ***Lombard RAC Rally*** (512K, CGA/EGA, $39.95) from Top Ten Software. It puts you in the driver's seat (actually, it puts you in the mother-in-law seat, but I'll get to that later) of a Ford Sierra RS Cosworth competing in the Lombard RAC Rally, a major European motor sports event.

Americans will be struck by the Britishness of this product. The driver sits on the right (or "wrong") side of the car, and shifts with his left (or "wrong") hand. Fortunately, there is no oncoming traffic, so you don't have to worry about getting used to driving on the left side of the road.

Your view is from the back seat, over the shoulders of the driver and copilot. From this vantage point you'll be able to see the driver shift gears and steer in response to your joystick commands. The copilot doesn't do anything but hold the map and clog up your rear view mirror, but that's okay because nothing comes up behind you anyway.

Lombard RAC Rally contains an aggravating paradox: you need money to buy parts to win races and need to win races to get money to buy parts. The Workshop is where you make repairs and purchase parts to customize your vehicle, such as bigger engines, fog lights, and four-wheel drive. Unfortunately, the game doesn't start you off with any money, so you'll have to finish in the top three in one of the five legs of the race to win some prize money. But you're pretty unlikely to do that without finding some way to bankroll custom parts and repairs. If you go slow enough to avoid crashes (and the resulting damage to your car), either you finish out of the money or you get an unceremonious bum's rush back to the main menu for not beating the target time for that leg.

The only other way to earn some cash is to participate in a "TV interview." You'll have 40 seconds to answer five questions about the RAC Rally. It's doubtful you'll know any of the answers, but since it's multiple-choice, you'll have a 1-in-3 chance of guessing correctly. With a little luck and some clever guesswork, you may get two out of five correct, which will net you £40, which won't buy you anything because all the goodies cost £50 and up. And since you can only do one interview per race, you'll have to go out and finish a leg of the race to get another crack at a TV interview. But you'll probably have to use your £40 to repair damage sustained while driving. And the cycle begins again.

All that aside, *Lombard RAC Rally* is an excellent driving simulation. It's much easier to stay on the road than with *The Duel*, but when you don't, the crashes are not as blood-curdling. Instead of losing lives, you sustain damage (indicated by unidentifiable pieces of debris flying by your windscreen) and are towed back onto the track. You can go to the Workshop at any time for repairs to bodywork, suspension, engine, or "tyres," but when the damage becomes too severe you're out of the race.

There are a couple of things that *Lombard RAC Rally* does better than any of the others. The roller coaster feeling you get when going over hills or around curves is unbelievable; your stomach really does go up into your throat, especially at high speed. Night and fog driving also add a nice realistic touch, even down to the effect of headlights and fog lights. If you can find a way to buy them.

On the Circuit

For those who like to do their driving on the race track, there's ***Grand Prix Circuit*** (512K, HGC/CGA/EGA, $39.95) from Accolade.

This simulation of Formula One racing gives you a choice of cars with the performance characteristics of the McLaren, Ferrari, or Williams racing machines. You compete against nine world-class drivers with individual driving abilities, and you can drive any of eight Grand Prix courses or do the whole circuit. There are also five difficulty levels from beginner to pro that make you increasingly susceptible to spin-outs, blown engines, car damage, and opponents' tactics.

The colorful EGA graphics and smooth scrolling make this game a joy to play. Unfortunately, it seemed to suffer from the same joystick disease as Accolade's other product, *The Duel*. Consequently, I spent most of my time concentrating on not careening out of control, which detracted considerably from my enjoyment of the game. Again, you may find using the cursor keys less frustrating.

The crashes are unspectacular to look at but disastrous. Your hood crumples and suddenly you're looking at the race standings with a DNF (meaning "dismal no-good failure") next to your name. No second chances. If you're driving the circuit, one crash can knock you so far back in the standings you'll need binoculars to see the leaders.

THE ARCADES

If a complicated driving simulation is too much strain on your brain after a long day at the office, a spin around the track may be just what you need. The games that follow are a selection of race-car simulations available for your personal computer that will test the stamina of your joystick finger without forcing you to think too much. In short, they're good, clean, relaxing fun!

Of course, all these games have their differences, and a few limitations as well. None of them give you a driver's seat view—in all of them you'll be looking "up the tailpipe." This isn't a fault, but it can be disconcerting if you're not expecting it. More important, many of them have bugs or quirks worth noting. First I'll discuss the pros and cons of each game, to give you a feel for what they're like to play, then I'll tell you about any bugs I discovered during play-testing.

That said, let's get started. There's no

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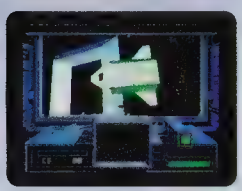

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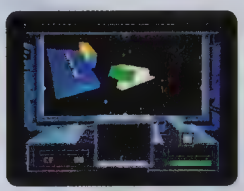

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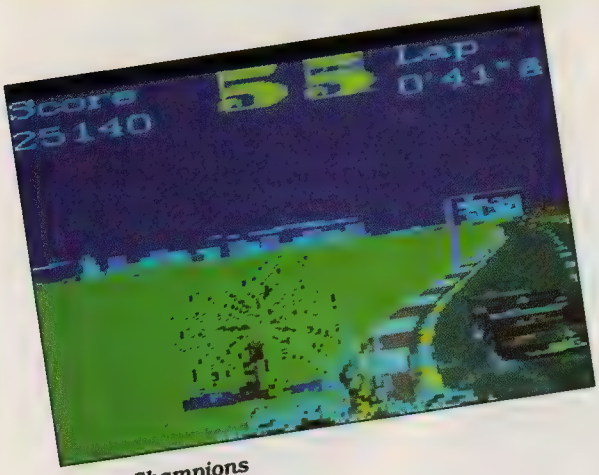

Turbo Champions

Crazy Cars

time to waste, not when you're in the mood to tear up the track.

Turbo-Charged

Turbo Champions (256K, CGA/EGA, $9.99) from Mastertronic has the potential to be a fun, flashy driving game; one whose low price would make it very hard to beat. Unfortunately, it's undermined by the presence of one very irritating bug.

Turbo Champions has very nice graphics, simple and *very* bright and bold. In this game, you control a big American-made convertible, the kind we've all dreamed about since seeing Suzanne Somers drive away in *American Graffiti*. When you crash, it's a spectacular sight—the car flips up and smashes down again. This is driving the way you wanted it to be when you were sixteen: drive fast, hang on, and who cares if you crash!

Before you start racing, you choose from eight tracks (ranging from easy and rectangular to twisting and treacherous) or build one of your own with the program's Road Construction Kit. It's very easy to use—pick a direction with your numeric keypad and preview various curves and corners simply by pressing the Enter key. There's room on the program disk to store four custom-built roads.

Once you hit the road, you're responsible for steering, shifting, and braking. You need all three to maneuver around the other cars on the road. The computer controls acceleration, which is disappointing since jamming the joystick forward is really what gives you the feeling of driving fast and furious. Whether you go for joystick, mouse, or keyboard control, straightaways leave you with little to do but watch, with no steering required and no acceleration allowed. Mouse control will take plenty of practice—you'll find it very sensitive to your movements. Nonetheless, it's a handy feature.

Scrolling is choppy; as you drive, the scene before you moves frame by frame, giving you a lurching feeling. These abrupt motions can be hard on your eyes, especially in CGA mode, where the screen is full of vertical black lines.

As noted above, arcade driving games don't reward prudent driving: I was awarded passing bonuses even as I was crashing into the back of an oil tanker. You'll find yourself straddling the road's center line as you slip between two cars and shrugging your shoulders when you spin out on a patch of oil or crash into a billboard hugging the edge of the road.

One last thing: If you want to keep track of your high scores, write them down as soon as they appear on your screen, because they'll go away quickly, never to be heard from again.

On the bug front: *Turbo Champions* wouldn't work with any of the joysticks I tested. According to Mastertronic's customer service department, a few early versions had this problem. *PCGames*' review copy is apparently one of those early versions—I tested it with Advanced Gravis, Kraft, and Wico joysticks, all without success. A new version sent by the company appeared to be infected with the same bug. According to Mastertronic's technical support department, the problem was with my Tandy 1200 PC clone (not supported, even though the *Turbo Champions* box specifically lists Tandy 1000/1200 compatibility). Further testing on other computers (with other joytick adapters), however, proved the problem to be in the program, not the machine. Purchase with care.

Let's Go Crazy

As ***Crazy Cars*** (256K, HGC/CGA, $39.95) from Titus loads, you'll be treated to slightly tinny but very recognizable rock music. It, along with the title screen showing high-performance cars upended and balanced on their noses, sets the tone for this program, which is as high-spirited as its title suggests.

In *Crazy Cars*, you set off on a cross-country road race in a series of performance automobiles. Your first is the

BEHIND THE WHEEL

I tried two flying yokes, the Maxx control yoke and the FlyWheel 4000 from Selectronics, on all the simulation games. Their steering-wheel shape made for a more realistic driving simulation but, because of the way you have to push the wheel in or pull it out to accelerate or brake, it's hard to move in discrete steps—they didn't work well as pointing devices for choosing items from menus. Still, it was worth the trade-off to get the more intuitive feel of driving.

—Bud Sadler

Mercedes 560 sedan. From there, as your skill increases, you'll be awarded a Porsche 911, a Lamborghini, and then a Ferrari GTO. Your road race will cover plenty of territory, including Arizona and Florida. Throughout the race, you'll fight to maintain control of your car as you catch air off the bumps and corner at speeds exceeding 150 mph.

Crashing, something you see a lot of in these programs, is not nearly so spectacular in *Crazy Cars* as it is in *Turbo Champions*. When you hit another car or one hits you, your car will simply move straight up off the road, then land again as soon as the other car has passed. (In the meantime, of course, your speed has plummeted to zero.) Once you've been hit once, it's important to move out of the way quickly or you'll find yourself being hit again and again as you try to get your car up to speed.

Crazy Cars displays your score as you go, constantly comparing it to the current high score. The ten best scores are recorded, so you'll have your chance for immortality.

Crazy Cars does have a few drawbacks. Its graphics are strictly CGA, and fuzzy CGA at that. Additionally, it asks you to take credit for your high scores by selecting your name, one letter at a time, with non-repeating arrow keys from an alphabet matrix. It's the most time-consuming and frustrating way to enter your name that I've ever seen.

On the bug front: The only problem I had with this program was a slight aversion to the new Wico Ergostick joystick; I had to hit the up arrow key once to get the car moving, then move on to joystick control.

Running Away

Out Run (512K, CGA/T16/EGA/MCGA/VGA, $39.95) from Mindscape was a hit video game—so popular Sega ported it over to the PC. The computer version of *Out Run* is uneven, with some quite good and some very bad points.

Like *Turbo Champions*, the graphics are bright and colorful but, also like *Turbo Champions*, forward motion is conveyed with choppy jerks, not with a smooth flow of movement. Additionally, the program takes more than a minute to load (on a 4.77-MHz PC) and you have to reload the program before every race. It's important to keep in mind that both these faults—jerky animation and reloading after every game—are often seen in arcade driving games. Unfortunately, they are particularly noticeable in *Out Run*.

Out Run includes graphic terrain ranging from California to France, and even includes the famed Autobahn. You'll be driving the ever-popular big red convertible, seemingly a classic when we think of driving fast and having fun. When you crash, you'll even see the occupants of the car fall out as it flips.

If you plan to get past the initial stages of the game, take advantage of the keyboard controls; using the joystick guarantees an early death. It just doesn't offer precise control, so you'll find yourself swerving all over the road and crashing often. Even with keyboard control, you're in for some challenging driving: in *Out Run*, coasting is impossible, so if you want to keep moving forward you have to keep accelerating (using your middle finder) while steering with your index and ring fingers. You'll also need a spare finger to shift with. If all this sounds a little like trying to pat your head and rub your stomach at the same time, it is. Better joystick control would be a welcome addition to this game.

You have a choice of three "sound tracks" with *Out Run*, but I'd suggest

OFF THE ROAD

Wimps. That's who drive those fancy cars. Real men drive trucks. Four-wheel-drive trucks. And *4 x 4 Off-Road Racing* (256K, CGA/EGA, $39.95) from Epyx gives you a taste of what it's like to drive manly vehicles over some of the toughest terrain on this continent.

***4 x 4* takes itself a lot less seriously than the driving simulations yet contains more complexity than the simple arcade device of driving fast and staying between the ditches. Keeping on the course is relatively easy; avoiding the endless parade of obstacles (tires, cattle skulls, boulders, etc.) that batter your vehicle is nearly impossible.**

But finishing the race is less a matter of how you drive than what you drive and how you equip it. You can compete in the Michigan Winter Wreck-off, Death Valley Trek, Georgia Mud Fest, or the Baja Challenge, and each has its special problems that will govern your choice of vehicles and equipment. There are four trucks to choose from, with different ratings for power, weight, gas mileage, endurance, ease of repair, payload, and fuel capacity. You start the game with $2000 to spend on such things as tires, winches, spare gas tanks, oil, transmission fluid, tools, coolant, spare parts, and (I told you this was a manly game) beer. Your truck will break down often, and you'd better have the right stuff to fix it. Pick the combination that's right for the course you're driving and put the hammer down.

You can play as a beginner, amateur, semi-pro, or professional, and you face up to 16 opponents, including the dreaded Doombuggy, who will try not only to beat you but to beat you up. If you hit certain objects on the side of the road, your truck goes up in a fireball. You get three lives, and you'll need them all and a lot of skill to be King of the Road.

I have yet to finish a course, even though I have a fair amount of real-life four-wheeling experience (not to mention a testosterone level that makes King Kong Bundy look like Pee-wee Herman). But the game keeps you coming back for more, trying new combinations of equipment and strategy.

So take a break from the sissy simulators and try a real man's driving experience. If you think you're tough enough.

—Bud Sadler

Out Run

Pole Position II

opting for simple sound effects. The music provided is very loud, to the point of being blaring, and it's sure to set off any incipient headache you might have.

On the bug front: I discovered that in the early part of the race, while approaching the water, if I moved to the left-hand side of the track I'd crash, even though I hadn't hit anything or gone off the road. The program's developers were unable to duplicate this problem, however.

In the Pole Position

Pole Position II (256K, CGA/EGA, $24.95) from Mindscape is an enjoyable game in the arcade tradition. It's entertaining and it demands quick reflexes, not deep thought. Joystick handling is good and the graphics are attractive, especially in EGA mode. The scrolling, like several of the games mentioned above, is rough, but in this case it's minor enough not to be a bother—only the track scrolls, not the entire screen.

In *Pole Position II*, you race a Formula One car twice in each round, first to determine your starting position in the big race, and then (as long as you qualify) in the race itself. You have to drive *very* fast to earn the inside spot in the front row—that's the coveted pole position.

Pole Position II has four tracks to choose from; three wind and twist from start to finish, while the fourth is a straightforward, rectangular test track. You'll quickly learn how to downshift so you won't have to brake as you take the corners. (If you're using keyboard controls, this will demand limber fingers.)

On the bug front: early versions of *Pole Position II* suffered from a bug in the form of an impossible-to-master joystick calibration system, leaving the game playable only from the keyboard. Mindscape, realizing the problem, has developed a new version without this problem; the company claims that all currently shipping copies of the program are bug-free, and owners of the early version can get a free update by contacting the company's customer service department.

The Finish Line

Whether you want to careen around a track or test your tires on the cliffs of Big Sur, there's a driving game out there for you. To pick the ones you'll like best, just take some time to consider the features each game offers—we've tried to help by including two ratings boxes with this article. That way, you can match what you want with what each game has to offer.

The current crop of games gives you plenty of scope for living out your dreams, so get out there and drive!

—Bud Sadler and Pat Payne

RATINGS

The PCGames rating system evaluates games on a scale of 1 (lowest) to 5 (highest) for five attributes:

Playability—evaluates the game's entertainment level and user-friendliness.
Graphics—indicates the sophistication of the game in its art, animation, background, and creative use of color.
Action—shows the intensity of the action in the game, an estimate of on-screen activity level per unit of time.
Strategy—measures the degree of brainwork required to play the game.
Value—balances the total of these attributes against the price of the game, a ratio of fun units to dollars.

	Out Run	Pole Position II	Turbo Champions	Crazy Cars
Playability	✔✔	✔✔✔	✔✔	✔✔✔
Graphics	✔✔✔	✔✔✔	✔✔✔	✔✔
Action	✔✔✔	✔✔✔	✔✔✔	✔✔✔
Strategy	✔✔	✔✔✔	✔✔✔	✔✔✔
Value	✔✔✔	✔✔✔✔	✔✔✔✔	✔✔✔

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TAKING A DIVE

Even inside a billion dollars' worth of nuclear sub, life at the bottom can get pretty rough.

The Navy doesn't pick just anybody to command a billion dollars' worth of nuclear attack submarine. And they don't send that kind of personnel and equipment out on just any old mission. And just because you have the absolute best technology and weaponry available doesn't mean you're the baddest fish in the sea, either.

What it does mean is that you've got to be very good—and very experienced—to handle the sophistication of a nuclear sub; your missions will be complicated and dangerous, and your enemies have spent lots of money and effort on equipment of their own just to make your life miserable.

A sub commander's basic objectives are simple: know where your enemies are and what they're doing without letting them know where you are and what you're doing. It's a lot like judo—for every move you've got, they've got a countermove, and vice versa. The one who knows his moves best wins.

The four games reviewed here—*Red Storm Rising*, *688 Attack Sub*, *Hunt for Red October*, and *Under the Ice*—put you in command of a nuclear submarine, forcing you to test your mettle against some of the finest weaponry above and below the ocean's surface. If you want to taste some of the problems modern sub captains face as they walk the thin line between cold and hot war—or step over it—sign aboard one of these games and start earning your hazardous-duty pay.

The Fleet's In

Few people who play these games will have the real-life experience to know exactly how accurately or inaccurately they simulate the reality of life aboard a nuclear sub. As in jet fighter simulations, game designers must take the best available data, guess the rest, and make some tradeoffs and modifications for the sake of playability. To be good, a game doesn't have to portray classified technology with an exactness that would wow a KGB agent. It just needs to capture enough of the complexity and strategy to make a challenging and playable simulation.

That said, MicroProse's ***Red Storm Rising*** (HGC/CGA/EGA/MCGA/VGA, 384K, $54.95) is an excellent simulation based on Tom Clancy's best-selling novel of the undersea side of World War III. It's surprising how much of the reality of sub warfare it puts within your control while staying reasonably manageable to learn. The game's most impressive feature is its accessibility to players at any skill level. In spite of its 100-page manual and somewhat cumbersome user interface, this is perhaps the easiest of the four packages to boot up and start playing right out of the box. And from that point you can work your way into a wonderfully complex and detailed simulation.

by Mark Reynolds

You can choose a beginner-level training mission and jump right into *RSR* without spending much time with the documentation. You can successfully complete the easier tasks, even though you'll understand very few of the game's many options. But your desire to use the few tactics you do understand—and incorporate some new ones—will lure you naturally into the more skillful levels of play. In that, *RSR* manages the most seamless learning curve I've seen in any tactical simulation.

Red Storm Rising offers an amazing variety of play levels and scenarios. You can play each scenario—from the two training missions, to individual missions, to the several missions involved in the entire World War III campaign—as a NATO sub commander at four different skill levels (beginner, casual, serious, and ultimate) in one of four time periods (1984, 1988, 1992, or 1996) with appropriate improvements in technology, in one of several types of submarines. That yields enough potential combinations to hold your interest for a long time.

The meat of *RSR* is in the Red Storm Rising campaign, which puts you in charge of a NATO sub in the Norwegian Sea Theatre for the course of WWIII. You receive various missions, with your ultimate goal to support a NATO victory

Photo courtesy of Nautilus Memorial Submarine Force Library & Museum

Red Storm Rising

and emerge as the most capable sub commander of the war. This campaign will involve all of the game's elements, including enemy ships and subs, aircraft, pack ice, seabed sensors, thermal layers, satellites, sonobuoys, various weaponry, and knuckles (torpedo-confusing turbulence caused by sharp turning and acceleration).

The *Red Storm Rising* manual is an excellent source of information on sub warfare and contains a wealth of advice on the many elements and conditions incorporated into the game, such as the effects of pack ice, ice floes, bottom terrain, or thermal layers on sonar; Soviet tactics; weapons capabilities; stalking and evasion; and radar. Each time you read these sections, you'll get a little more information to improve your game play, and the simulation becomes even more realistic.

Although *Red Storm Rising* includes a joystick option, don't bother selecting it. You do most of your work, even with a joystick connected, from the keyboard, and the game box has overlays for the IBM PC/XT/AT, PS/2, and Tandy 1000 keyboards. If you're playing on a laptop or other unconventional keyboard you've got a problem, because memorizing the key commands without the overlay would be difficult.

RSR doesn't offer much in the way of graphics—the display you'll see most often is an overhead view of the ocean on which vessels are displayed as small squares. However, this graphic simplicity makes it easier to understand and react to the many factors of sub warfare that *RSR* incorporates.

You've got to install *Red Storm Rising* on floppies or a hard disk in order to save games in progress, but you have to start the game with the master 5¼-inch disk in the A: drive. If you don't have a 5¼-inch A: drive, you can't play this game. Besides that, you must use the manual to identify a vessel displayed on screen to play any scenario other than the training missions. Such heavy-duty copy protection would be a serious discouragement against a lesser game. I find *RSR* good enough to get away with it, but then I haven't yet mangled the master disk while in the middle of the long WWIII campaign. Since the manual is such a valuable source of information, one to which you'll want to keep referring for insights on how to improve your performance, I can't imagine anyone playing successfully from a pirated copy.

688 Attack Sub

Das Boot-Up

If you've always wanted to be in command of a U.S. Navy Los Angeles-class or Soviet Alfa–class nuclear attack sub, try ***688 Attack Sub*** (HGC/CGA/T16/EGA/MCGA/VGA, 384K, $49.95) from Electronic Arts. It comes complete with ten missions ranging from training exercises to a ballistic-missile attack against land targets at either beginner or standard difficulty levels. This game presents the most ambitious graphics of the four, including a detailed scene in the conning tower, through-the-periscope views, and digitized faces of crew members. If you prefer a little more graphic realism with your simulations, this is the game for you.

Due to the data compression on the master disks (2 megabytes on one 3½-inch or two 5¼-inch disks), you've got to copy them onto a hard disk or onto other floppies before you can play. The disks, therefore, aren't copy-protected, but you've got to locate and enter various words from the manual before you can begin each mission.

Your main control center is the conning tower, from which you send orders to the Radio Room, Ship's Control, Periscope, Navigation Board, or Sonar Room. Once you've selected one of these, a display panel pops up from which you click on buttons or icons to indicate choices. Although mouse control is easier, keyboard control is smooth and precise. A set of quick-key commands eliminates the need to move through each selection via cursor-control keys.

The game includes communications software that lets you connect your computer to another via modem or null-modem cable so you can play against a friend. It also features a "boss key" so you can exit to a fake DOS prompt whenever you hear an unwelcome intruder coming. You can exit to real DOS when you leave the conning tower, but you can't save games in progress. Since no mission requires hours of play, maybe a game save isn't absolutely necessary, but I'd opt for that over a boss key.

Although the manual explains that the designers made certain compromises

with realism in order to preserve playability, *688* still simulates enough tactical realism to satisfy all but the most demanding and knowledgeable players. The fine manual offers enough basic information on sub and weapon capabilities, ocean environment, and strategy to get you started learning how to use those factors in different situations.

Under its explanation of each of the ten different missions, the manual offers points on playing the U.S. or Soviet side and playing via modem.

The Hunt for Red October

Seeing Red

In Datasoft's submarine simulation ***The Hunt for Red October*** (HGC/CGA/EGA, 512K, $49.95), based on Tom Clancy's novel of the same name, you're the commander of the *Red October*, a Soviet nuclear-powered sub on its maiden voyage to test its caterpillar drive, a superquiet propulsion system. Your disillusionment with the Soviet system has led you to a daring plan in which you intend to defect to the West, offering your sub in trade for political asylum.

Your hand-picked senior officers have thrown in with you, but the Russians are putting everything they have into keeping the *Red October* out of enemy hands, whatever the cost. Since your sub carries enough ballistic missiles to destroy over 200 cities, the Americans are suspicious of a trap, so they're also ready, should you try anything unusual near them.

This game doesn't demand as much in the way of offensive tactics as it does brilliant stealth, evasion, and navigation. You do have a few torpedoes, but not enough to handle all comers, and your ballistic missiles are definitely out. *HRO* has only one skill level—difficult—and one scenario, though the many possibilities within that scenario can keep you playing again and again.

The Hunt for Red October also has the easiest interface for controlling your sub of the games reviewed here. Your compass, speed, and depth gauges are always on screen, so you can move the cursor and click on a position to make quick adjustments. When things heat up, you'll need just that. The graphics aren't as crisp as they are in *688*, and the program doesn't support a Tandy mode, so unless you've got an EGA card, you're limited to CGA, where it's not always easy to tell exactly what's going on.

You control the cursor via keyboard or mouse—both are smooth, but mouse is best. Unfortunately, the cursor is a nickel-sized hammer and sickle. I guess that's supposed to bring a Soviet flavor to the game, but it makes it hard to point precisely. Don't the Russians have small arrows, too?

HRO's scenario is its strongest draw. Tom Clancy's fascinating plot that led to yet another best-seller works as well in the game as it did in the book. And just as in the book, the *Red October*'s commander has a tough job ahead of him. From the beginning, however, he was well trained—you are not. Without the option of running through a few practice missions to learn the ropes, plan on losing several of these valuable subs before you manage even a D-minus against your first obstacle.

And this first obstacle is a killer. You've got to navigate through the maze of undersea canyons and mountains that make up the Reykjanes Ridge, located between Iceland and Norway. It's a popular place, thronging with Soviet warships and subs, U.S. attack subs, and a complex underwater listening network. Like I said, plan on spending a lot of time here learning what to do—and what not to do. And that's only the beginning.

RATINGS

The* PCGames *rating system evaluates games on a scale of 1 (lowest) to 5 (highest) for five attributes:

Playability—evaluates the game's entertainment level and user-friendliness.
Graphics—indicates the sophistication of the game in its art, animation, background, and creative use of color.
Action—shows the intensity of the action in the game, an estimate of on-screen activity level per unit of time.
Strategy—measures the degree of brainwork required to play the game.
Value—balances the total of these attributes against the price of the game, a ratio of fun units to dollars.

	Red Storm Rising	688 Attack Sub	The Hunt for Red October	Under the Ice
Playability				
Graphics				
Action				
Strategy				
Value				

Down Under

Lyric Software's technically sophisticated ***Under the Ice*** (HGC/CGA/EGA/VGA, 512K, $39.95) puts you in command of a group of NATO or Soviet subs in the Norwegian/Greenland seas area during World War III in a choice of three scenarios. The game is very different from the previous three and is definitely not for everyone. Designer/programmer John Almberg is a naval historian who has done careful research on his subject and created a game for his own enjoyment. The result is a simulation with some accurate realism in certain features (sonar, for example), but which lacks many of the other elements that you would expect in commercial software.

The documentation is remarkably sparse. Before you play, you've got to read the README.NOW file on the game disk for important info that's not included in the written manual. Then you'll have to load the game, try the documented features, and deduce the rest from what you see happening on screen.

The screen redraws itself every few seconds, or whenever you click on a selection. It's a little frustrating to have to wait for this, especially if you've added a map overlay or two, which really slows down the redraw.

If you get this game, make sure you've got a mouse. Keyboard control is much too tedious. And there's at least one serious bug: If you're playing the Soviet side and you press PgDn to select a sub, as the documentation suggests, the game hangs up and you've got to reboot your system.

Although there's a lot of realism in the submarines' capabilities, subs are the only vessels in the game. And each scenario involves a group of NATO subs against a group of Soviet subs. In fact, Soviet subs have adapted the wolfpack strategy developed by the Germans in WWII, but NATO subs do not usually use the tactic, although it is certainly possible that they could.

If you're an ex-submariner or naval historian yourself, or if you just have a very special interest in the subject and don't mind taking a few given pieces and developing the rest of the puzzle on your own, I think you'll find Mr. Almberg's work fascinating.

At Mission's End

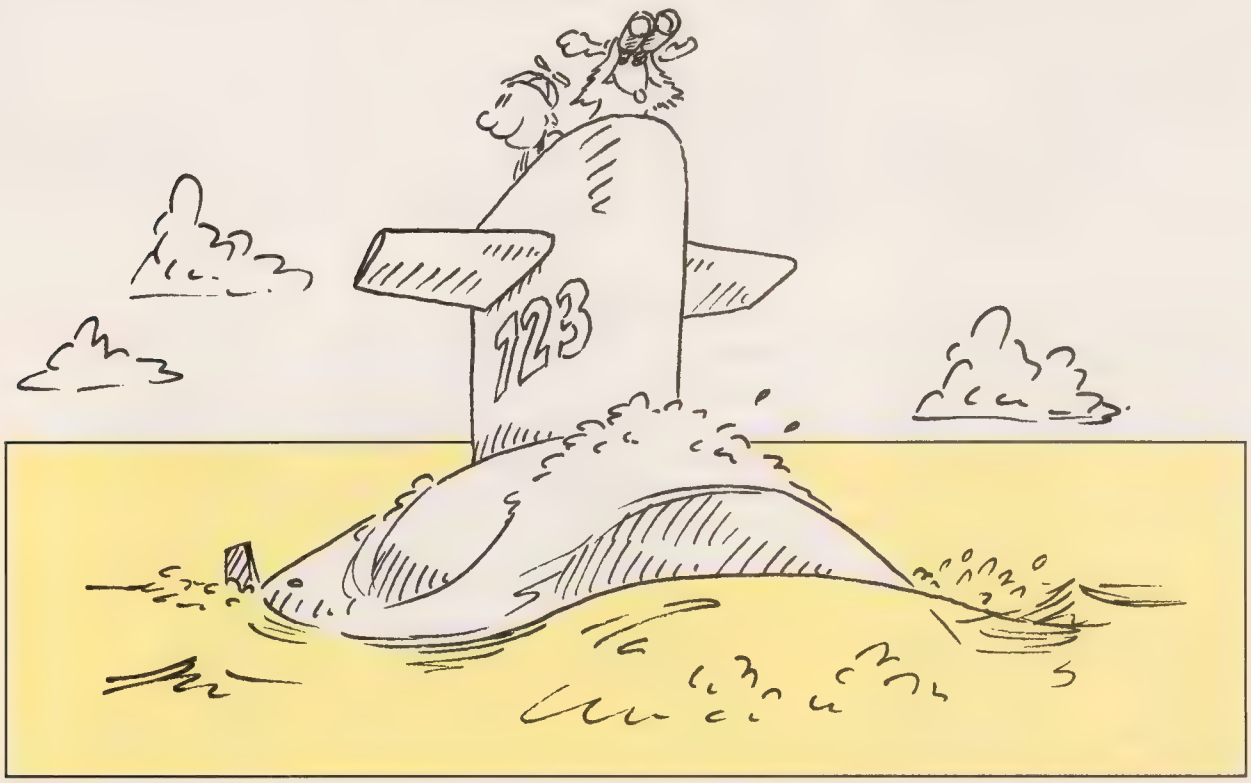
Of these four games, *688 Attack Sub* should satisfy most of the casual strategists out there. It's a reasonable simulation with lots of graphics, action, and variety to hold your interest. For those who'd rather match wits with a human opponent than a computer, the modem or cable option for two players is a real bonus.

For my money, *Red Storm Rising* offered the best challenge and gave me the greatest sense of what it must be like to command a nuclear attack sub. It brings the most elements into play, and the ease with which it draws you into its deeper levels of complexity sets a standard of excellence for strategy simulations.

The Hunt for Red October follows a brilliant story line and offers a real challenge. The formidable difficulty it presents right from the beginning will frustrate many players, however, so be prepared to spend some time learning the ropes before you actually get into the game. Save your game often.

Under the Ice puts too many burdens on even relatively experienced strategy gamers. Consider this one only if you have a serious interest in modern sub warfare. Then I think you'll find it worth the effort.

Yeah, life at the bottom is pretty rough. The air gets stale and your skin gets pale, and you never really know what's going on outside, despite the sophisticated electronic information you receive. Come to think of it, it's a lot like life in front of my computer. □



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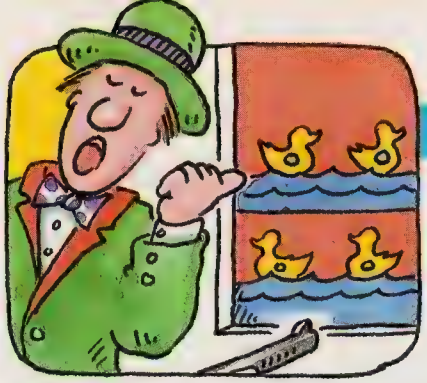

the midway

In the following pages, you'll find software sure to appeal to you no matter what your gaming preference: these packages cover the spectrum—and it's a very broad one—of entertainment software. In this issue, we've got fantasy role-playing games, brought to you by long-time player Guy Wright, and we've got basketball games, courtesy of sportswriter and computer expert Jeff Angus. If you're looking for a brain-teaser, there's even a round-up of television game shows thanks to author (and former PCGames' editor) Lydia Veale.

So take your pick. Call all the plays with your favorite basketball game, take a trip to a fantasy world or accept the challenge of second-guessing the celebrities on your favorite game show. Whatever kind of excitement you're seeking, there's something here for you. That's the beauty of computer games—there's something sure to attract your attention, no matter how diverse your interests.

No matter which games you enjoy, we at PCGames hope these articles help you enjoy them even more.

Happy gaming!

FANTASY

There's a noise in the shadows ahead. At least you surprised whatever it or they are. Enough time to ready a weapon or start a spell. Then the monsters appear and you have a choice to run or stay and fight. It's only a few golems and a slime beast of some sort. Fight it out. But the beast has poisonous fangs and one of the golems gets off a paralyze spell before being cut in half. Three of the six members of your team are frozen solid, one of them the wizard. Two golems lie in their own green blood, but there are two more still standing and that slime beast hasn't got a scratch.

Concentrate on the beast. Three of your best shots and the beast still fights. Another member goes down before the golems. The next blow somehow hits a vital spot and the beast goes down but the golems' swords have taken their toll. Another exchange and another member falls. Now is the time to use some of that luck. One bone-crushing stroke and a golem dies, but the other gets through. Another swing, a miss, and dark falls with the golem's killing stab.

This is a taste of what it's like to immerse yourself in a fantasy role-playing game.

There are plenty of fantasy RPGs available for your PC and all share certain elements. First, they are set in fantasy worlds where magic works and gunpowder was never invented. Second, you control the actions of a group of characters with individual skills, talents, attributes, and equipment. Third, the characters change as the game progresses by gaining experience, training, and resources (magical, monetary, or otherwise). Fourth, there are lots of monsters, treasures, magic, dungeons, spells, clues, battles, strategy, and fun.

Fantasy role-playing games let you be a wizard or a thief, a swordsman or a sorcerer. When you want to escape to a different world, they're a great choice.

Common to almost all fantasy RPGs is a plot that runs like this: The once-beautiful town/city/land of (insert Tolkienesque name here) is plagued by the evil wizard/sorcerer/magician (insert another Tolkienesque name here). Your band of elves/gnomes/trolls/humans/hobbits/dwarves/halflings must: (a) find the magic crystals; (b) fight hundreds of monsters; (c) kill the evil whomever; (d) all of the above.

Heading for the nearest character-generation menu, you whip up an assortment of fighters, barbarians, paladins, thieves, robbers, sorcerers, wizards, archers, clerics, and knights. Then out you go to win the game? Not quite. First you have to survive long enough to get some weapons, food, armor, and experience. This is done by beating up weaker monsters and common thugs and by staying alive long enough to loot the bodies. The more

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battles you survive the stronger you can get until you are ready to go after bigger prey.

By the time your characters have advanced to near-godhood, when your magicians can fry a small army with a yawn and your warriors can cut a tank in half left-handed, you have probably picked up enough magic weapons, armor, spells, and information to tackle the big wazoo, wherever and whatever it is. But don't expect that to happen right away. Most of these games take anywhere from 10 to 80 hours to finish, and then there are sequels.

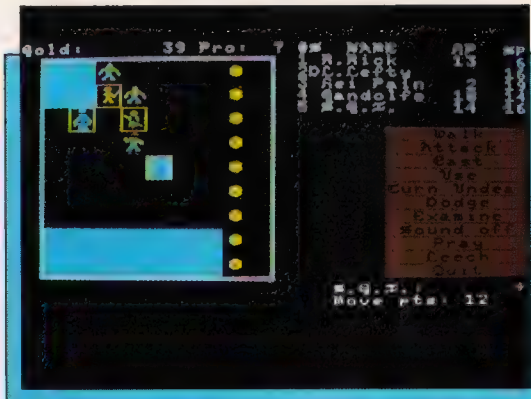
Strategically Speaking

Strategic Simulations has been doing fantasy RPGs for a long time. Two of their latest multi-character RPGs are *Demon's Winter* and *Dungeons & Dragons: Pool of Radiance*.

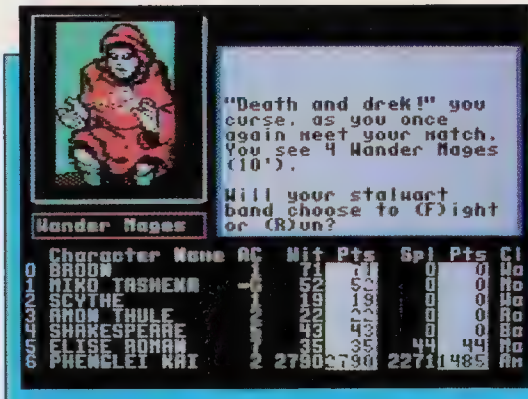
Dungeons & Dragons: Pool of Radiance (CGA/T16/EGA, 384K, $49.95) is probably SSI's most in-depth fantasy RPG. Everything from creating your characters (including customizing the characters' pictures and icons) to the 3-D battles is nicely detailed. Every monster and character has its own picture. All of the characters can move anywhere they want and you can add computer-controlled non-player characters. You can even let the computer take control of some or all of your characters in battle. The battles are animated with flying arrows and sparkling balls of energy. This is a well-done game that incorporates almost every option you are likely to find in a fantasy RPG.

In ***Demon's Winter*** (CGA/EGA, 384K, $39.95), there are five races and 10 classes (including visionary and scholar) of character to pick from, 25 different combat skills like Kung Fu and berserking, rune magic, chants, visionary skills, and lore. There are ten different gods that your characters can call upon, and dozens of extra

Dungeons & Dragons: Pool of Radiance



Demon's Winter


"Death and drek!" you curse, as you once again meet your match. You see 4 Wander Mages (10').
Will your stalwart band choose to (F)ight or (R)un?
Wander Mages
Character Name AC Hit Pts Spl Pts Cl
0 BRODN 1 71 0 0 Ha
1 MIKO TASHENA -6 52 0 0 Ma
2 SCYTHE 1 19 0 0 Wa
3 AMON THULE 1 22 0 0 Ra
4 SHAKESPEARE 1 45 0 0 Ba
5 ELISE ADMAN 1 35 44 44 Mo
6 PHENGLEI KAI 2 279 90 227 148 5 Am

The Bard's Tale II: The Destiny Knight

activities built in, like hunting for food, joining guilds, and summoning beings. The combat scenarios even include a sea battle. During combat the fastest go first and each character gets a certain number of movement points. So you could move in, take a quick swing, then spend the rest of your points dodging the counterattack. *Demon's Winter* is a multi-leveled game with a good combat system and plenty to explore.

Siren's Song

The Bard's Tale II: The Destiny Knight (CGA/EGA, 512K, $49.95) from Interplay Productions has had great commercial success, with good reason.

It is, essentially, a bigger version of the original *Bard's Tale*. There are six new cities, 25 dungeon levels, over 100 monsters, banks, casinos, wilderness travel, computer-controlled non-player characters, and a slight enhancement in the combat system to allow ranged weapon options (before actually getting into hand-to-hand combat you can take a shot with a bow or cast a spell).

Combat for *Destiny Knight* is limited. An animated picture of the monster appears, and you decide to fight, run, defend, cast a spell, sing a bard song, or whatever. You are told how many beasties you face and what types they are. You then decide each of your characters' actions for the round. When your decisions have been made, the program gives you a blow-by-blow account of how the round went.

Many forms of magic, with numerous spells and levels available, form the backbone for *The Bard's Tale II*, like its predecessor. There are conjurers, magicians, sorcerers, wizards, archmages, and bards using up to 79 different spells, seven bard songs, and dozens of magic items.

While the combat system is a little restricting, the graphics for

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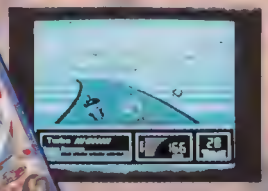

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The Bard's Tale II are exceptional. The 3-D views, monsters, and character pictures are well done and the overall scope of the game makes it easy to learn but difficult to master. I recommend it.

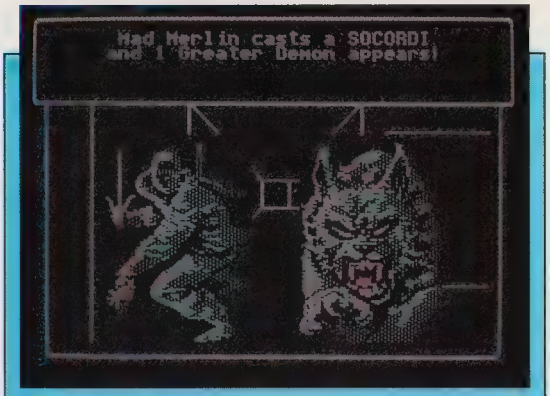
Wizards Galore

Sir-Tech Software has been producing fantasy RPGs for a time—their *Wizardry* series is a lesson in RPG history.

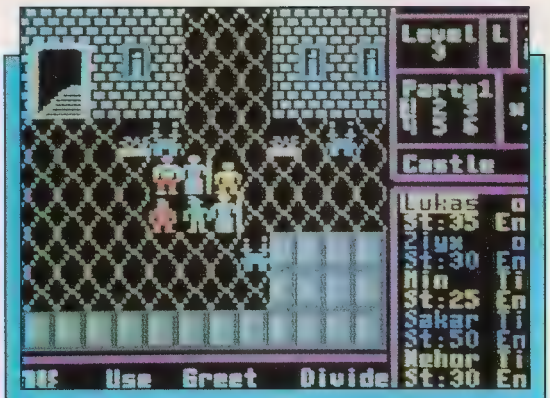
The latest scenario is ***Wizardry V, Heart of the Maelstrom*** (CGA/EGA/VGA, 256K, $49.95). It is nearly a complete revamping of the *Wizardry* system. First, you can either create new characters or bring in old ones from other scenarios. In the creation process you name the character, supply a password if desired (so your son or your cleaning lady can't get at your characters), then pick a race and moral alignment. The computer then picks some initial stats for you and a random number of bonus points that you can distribute. This lets you "customize" your characters' attributes to a degree.

You are presented with a 3-D view of your surroundings; even combat scenes are without a tactical-level map, but the graphics of both are greatly improved over earlier *Wizardry* scenarios. With new mazes, new character types, computer-controlled non-player characters, 40 new spells, and more options everywhere, *Heart of the Maelstrom* is a great game.

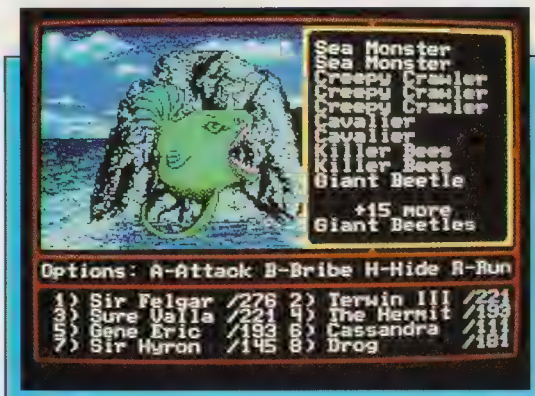
For people who prefer epics to short stories, the entire *Wizardry* series will be a find. Each of the first three games in this series builds on the last, demanding previous experience and becoming progressively more difficult. The fourth *Wizardry* scenario, *The Return of Werdna*, takes a sharp turn to the left, however. Unlike any other fantasy RPG, you play the evil wizard at the heart of a ten-level maze, battling hoards of do-gooding adventurers as you try to escape. Remember, however, that this is an expert-level RPG and should not be your first game of this genre.



Wizardy V, Heart of the Maelstrom



The Magic Candle



Might and Magic II

Lighting the Way

The Magic Candle (CGA, EGA, 256K, $49.95) from Mindcraft takes a slightly different approach to the fantasy RPG. First, your main character is summoned before the king and given his assignment. You then wander about the castle until you find the knights' room and recruit 5 comrades from a list of 24. Each character has special abilities, skills, and even professions, such as fighter, carpenter, tailor, gem-cutter, and so on.

The usual view is an overhead map of the immediate area around your six characters, but you can switch to a large-scale map at any time. In combat every member of the party has a chance to move, attack, cast spells, or whatever and, depending on their dexterity, may be able to do more than just one thing. Combat is performed on a tactical map, with characters able to move and fight freely.

The most interesting features of *The Magic Candle* are more subtle than its combat system or quest (to keep the dragon Dreax from escaping from the magic candle's flame). The game does have most of the elements of other fantasy RPGs but the authors and programmers seem to have taken a new look at what it means to go questing in an imaginary land. There is a lot of detail not normally found in other games, like the ability to split your party up into as many groups as you wish, even setting one character to stand watch while the others sleep in camp. You can get jobs if your character needs the money, has the skills, and finds someone willing to hire him or her. There are libraries where you can look up clues, homes (with peaceful inhabitants), taverns, schools, and an extensive area to explore by foot, by sea, or by teleportation. People work their hours then go

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home to eat and rest, so you can't show up at 2:00 a.m. and expect someone to sell you a new sword (they might not even let you past the city gates at that hour).

It is a good try at a complete, self-contained world that you have to learn to live in. Because of its interesting approach to life in a fantasy, and a slightly more gentle slant to getting ahead, *The Magic Candle* is one of the best RPGs to come along.

Strong Magic

Might and Magic II (HGC/CGA/T16/MCGA/EGA, 384K, $49.95) from New World Computing has some of the best 3-D graphics going. It is giant-size, overflowing with monsters, weapons, spells, and everything you could want from a fantasy RPG.

Might and Magic II offers even more features than the original system, with 250 monsters, 250 weapons, 96 spells, computer-controlled non-player characters (hirelings), two more character classes, and 15 new secondary skills. Plus, the graphics are better.

When creating characters, you are given a random set of statistics that you can apportion among the various attributes. As you switch them about, the classes that the character can be are displayed (i.e., trading a high intellect number for a low one might eliminate Sorcerer as a class option). When you have the numbers you want and have chosen a class, you choose a race, moral alignment, and sex for the character. Race selection can also change selected stats (a Gnome gains 2 luck points while losing 1 speed and 1 accuracy).

Might and Magic II is, like its predecessor *Might and Magic*, well worth playing.

Stayin' Alive

All these games take a fair amount of time to learn and a *lot* of time to finish. They are not action-oriented at all, and while fighting monsters is a big part of the games, you spend most of your time inspecting the characters, mapping, moving items around, and trying to keep everyone alive.

You'll notice that I didn't talk much about winning the games, because winning is almost a secondary objective. The main goal is getting your characters to a point where they can battle just about anything the game throws at them. By the time they can do that, you have usually spent enough time wandering about to have a good idea how to win. Many fantasy RPG players just keep going even after "winning" the game, however. The fun is in creating and developing your band, and if the game is good you will get very attached to each character. I find that I invest my characters with personalities, even though the games don't go quite that far.

Exploring, learning, fighting, advancing levels, and gathering items are the elements of fantasy RPGs that make them different from other computer games. So go ahead and explore. Fantasy role-playing games give you access to a whole new world.

—Guy Wright

Guy Wright is a long-time gaming enthusiast and former editor of Amiga-World *magazine.*

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BASKETBALL

Basketball games on a personal computer are dazzling spectacles, complete with top-notch graphics and sometimes featuring sound effects, always better when played with a joystick. If the In-Your-Face-Disgrace dunk, the 360-degree reverse lay-up, or the 30-foot jumper from another county are your meat and potatoes, sit down at this banquet and feed. The action on the court is hot and sure to keep you entertained for hours. While it won't burn anywhere near as many calories as the real thing, I can guarantee you that your joystick hand and trigger thumb will need some deep-heating rub at the end of a session with any of these games.

The only thing missing from these games is serious coaching. The most mind-oriented of the three, Accolade's *Fast Break* allows substitution from a short bench and provides a comprehensive playbook. Melbourne House's *Magic Johnson's Basketball* and Electronic Arts' *Jordan vs. Bird: One-on-One* offer a full range of animated graphics but take advantage of your fine muscle coordination and eye/hand skills only.

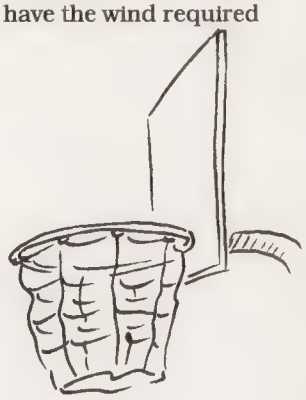
Why Action?

So why this accent on physical dash and panache with a corresponding lack of team strategy? There are two factors: general fan knowledge of the game and the lack of democracy inherent in a sport where the 94 percent of the population under 6'3" is likely to fail regardless of skill.

Basketball games let you take to the court without ever leaving your seat. You don't even have to bring your sneakers.

Basketball fans generally don't know as much about their sport as baseball or football fans. The strategy is hidden, the subtle factors that make for a good or bad matchup (e.g., the shooter can only hit a respectable percentage of his shots from outside without a hand in his face, while his defender is good at getting around picks) aren't measurable by statistics. What *are* fans expert with? The visuals.

And far more people can fulfill their need to physically succeed on recreational baseball or softball fields than on the basketball court, so there's a greater void to fill with a basketball action game. Even if height wasn't the determining factor in street-ball success, only a few of us have the wind required



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Targhan is probably the most stunning game you'll ever play.

Targhan is an adventure-action game with more than 120 landscapes and 40 different characters. The game is playable on either keyboard or joystick.

The game offers digitised sound and outstanding graphics.

It will be released on Amiga, Atari and PC (EGA, VGA and CGA) by the end of Aug. The game will run on both colour and mono screens.

Look for reviews in *Commodore User, Popular, The One, C&VG, Ace, ZAP, The Games Machine* and *Amiga User International* soon!

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to play roundball with any intensity. I can remember a pick-up game between several youngish sportswriters who covered the Seattle SuperSonics; we averaged about 8 percent from the floor and there were more injuries than points scored. Face it, most of us have to use a game to have a chance to slam-dunk or block a shot.

So if you want to join the shot parade, put on your basketball shoes and hit the floor—with a computer game. Since you probably won't want to buy them all, let's see if we can figure out which of the current crop of games suits you best.

One-on-One

When Julius Erving, the esteemed Dr. J, retired, Electronic Arts recast its extremely popular *Julius Erving and Larry Bird Go One-on-One*. Frankly, I was expecting the sequel, using the Chicago Bulls' Michael Jordan as the competition for "the Hick from French Lick," to be the same game with a different name. I was wrong.

Jordan vs. Bird: One on One (HGC/CGA/T16/EGA/VGA, 384K, $39.95) is not just a quick edit of the code to reflect a different name—it's an entirely different game. The graphics take into account Jordan's moves, his looks, and his style.

There are three half-court games under the main menu: a one-on-one Bird vs. Jordan match, a slam-dunk style contest (Jordan's forte), and a three-point shootout (Bird's meal ticket). For each, there's a practice session where you can mess around without much self-humiliation.

You can play one-on-one choosing either NBA star as your surrogate, with another human player guiding your opponent or with the computer running him. You can choose from four levels of skill. The full-game option is four periods of a length you choose, but you can play "first to 15 points" or "first to 11 points" instead.

Jordan vs. Bird: One on One

Magic Johnson's Basketball

Fast Break

I recommend this one-on-one mode as the most entertaining in the package. The three-point contest and the various slam-dunk routines are too much like the self-indulgent Roman Games aspects of halftime at the NBA All-Star Game. The key factor in success here seems to be timing the release of the button to send a shot into the air. Time it right and you'll probably make it; time it wrong and you'll ring the rim. These contests will keep you entertained for about half an hour at most, although the skill with which the animation is executed is awesome.

This is the main strength of the game, the incredible way the two pixelated players really move the way their corporeal counterparts do. If you take Jordan in the one-on-one, you can fake Bird out and blow past him with a burst of speed. Bird, in the identical situation with the identical control jiggling, can't blow past Jordan; he can, however, sink a shot through pressure defense more easily than Jordan can.

If you ever wanted to play against, or even be, either one of these basketball greats, *Jordan vs. Bird* is the choice for you.

Two-on-Two

Everybody's favorite all-around talent and this year's regular-season MVP is the star around which ***Magic Johnson's Basketball*** (CGA/T16/MCGA/EGA, 512K, $39.99) from Melbourne House was built. A parallel version to the video arcade game called Magic Johnson's Fast Break, this PC game expands on the possibilities of the one-on-one game by providing a two-on-two contest. The animation is a little less ambitious in its characterization (*all* the players are Magic Johnson), but it covers the full court, panning from one end to the other, even showing the coaches.

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Jigsaw! comes with at least ten graphic images. Plus, you can get additional disks filled with an all new selection.

You can even call up your own images created from popular paint programs. Which means there's really no end to the number of puzzles you can piece together.

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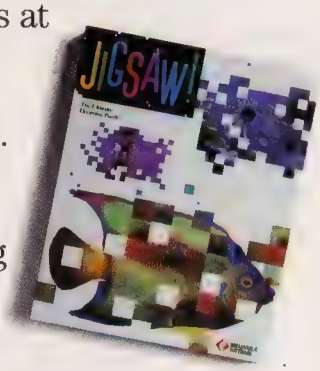
And be forewarned. Though critically acclaimed *Jigsaw!* is easy, there's one thing you may find difficult. Quitting.



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midway

You can run rudimentary plays in this game, but you won't have precise control over your players. I used my teammate for a screen (an object between the shooter and a defender) to get a little elbow room, but I couldn't get him to move predictably enough to be a pick (an object you run past to peel off or delay a defender). Passing is quite an art in this game, and none of my three players succeeded in hitting more than half their attempted passes. These two factors turn a potential two-on-two into a 1.5-on-1.5, since you can't get the full effect of a teammate.

Joystick play is definitely superior to keyboard in *Magic Johnson's Basketball*, although even some of the joystick routines are not obvious. To jump in the air to block a shot, for example, you press the fire button while pulling the stick *down*. These routines are not cripplingly counter-logical, but, unless you're dyslexic, you'll get blown out of a few games until you master them.

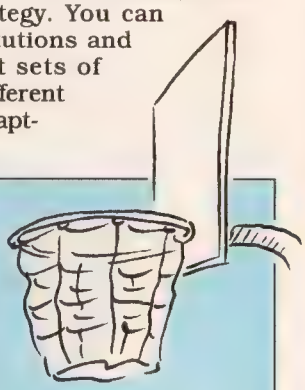
The full-court graphics and the ability to run some simple plays are the best parts of this game. The worst, I think, is the sucker-punch feature, a joystick command that allows you to slam an opponent to the floor with a forearm shiver. While I agree basketball is a contact game, I think such behavior is quite out of character for the real Magic Johnson and sets a needlessly bad example for young 'uns. However, if this game were renamed *Bill Laimbeer's Basketball*...

Three-on-Three

Three-on-three ball, the Jammers versus the Slammers, is the core concept behind Accolade's ***Fast Break*** (HGC/CGA/EGA, 256K, $39.95). You control one player, allowing the computer to handle the other two, but you can switch which of your players you're running with a quick click of the fire button.

Fast Break players aren't modeled after real NBA or college stars; they do, however, have names and designated levels of skill at running, shooting, ball handling, and rebounding. I found the ball handling to be the most noticeable difference between individual players: Try to use a center to bring the ball up the court and you're destined to suffer.

The three-on-three naturally adds a layer of strategy. You can make substitutions and use different sets of players for different situations, adapting to your opponent's team.



"To air-ball is human; to give off, divine."
—Paul Westhead

But the real potential for strategy lies in the game's "playbook," a set of 14 plays and an open slot for creating your own. From this set, you can have five in your arsenal of choices at any one time. The plays—including give-and-goes, an alley-oop, and a double screen—are a great idea. I think most players will find the five they can most easily execute and stick with them, because choosing a play is not as important as precision in handling player movement.

For some of the plays, you have to sequentially control each of your three players. This is serious choreography, and it's not easy to accomplish. When you succeed, however, it is very satisfying.

The graphics are good, though they don't compete with the other two games. Of the three, this will take the longest to master and will be the last the initiated will tire of.

Wrapping Up

For pure animated realism, *Jordan vs. Bird* is the choice. For a balance of team play-execution and fine animation, *Magic Johnson* gets the call. And for a mix of play calling, player selection, and eye/hand coordination, *Fast Break* sinks the buzzer shot.

In all cases, this may be your best chance of shattering a backboard while the fans cheer. So boot up your computer and play ball!

—Jeff Angus

Jeff Angus, a former basketball writer for the Seattle Sun *and both AP and UPI wire services, currently works for Farallon Computing.*

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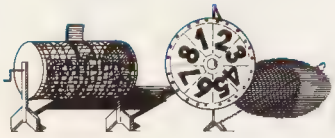
GAMESHOWS



For those of you who enjoy watching television game shows, your chance to be the contestant and big-time winner is here. And for all you armchair experts who always think you know the answers, it's time to get in the hot seat and see how you do under pressure. Several companies have brought popular game shows to the computer, so now you can get your fill whenever you want—and without commercials, too!

Most of the games I reviewed are on par with their television counterparts, and they aren't difficult to play. The price tags on these games make them easy to obtain, too; all retail for under $15. No peripherals, such as a joystick or mouse, are necessary, although some games will support them.

These games don't require a large investment of your time to learn. Each takes 15 minutes or less to play (except *Jeopardy*, which takes about 30) so, just like television, you can play two rounds in a half-hour.

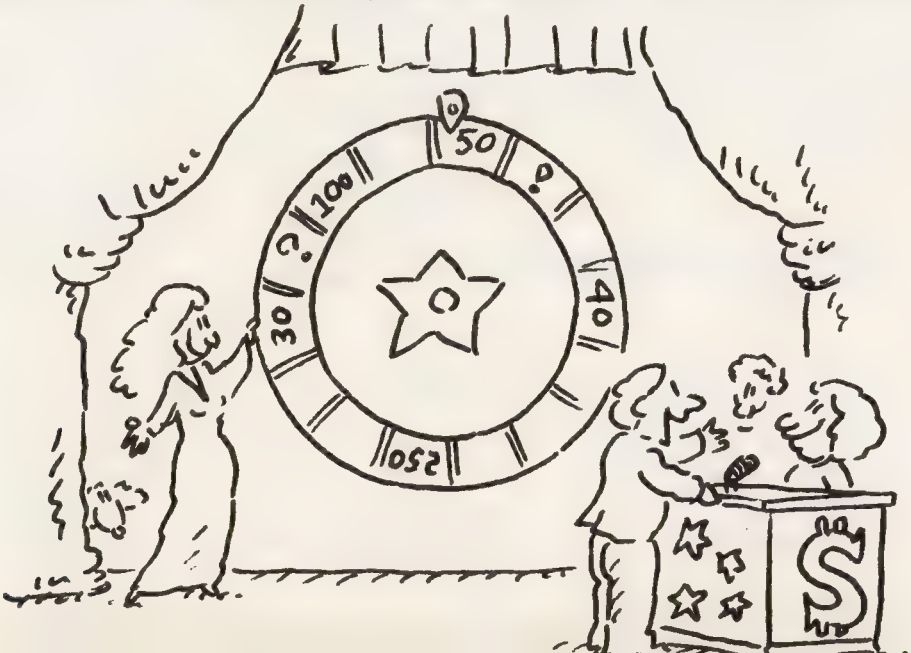
Get Ready for Action

Jeopardy is my favorite game show. Not only is it entertaining, but you can actually come away having learned something. ShareData's ***Jeopardy*** (HGC/CGA, 256K, $12.99), the computer version, is every bit as enjoyable as the real thing. While the game loads, you are treated to the familiar *Jeopardy* jingle. The program offers you several male and female characters to choose from. If you play against the computer as I did, it randomly assigns two opponents of varying abilities to play against you. If there are three real players, each has the opportunity to pick a character.

Match wits with competing characters and chuckle at their amusing antics in the computer version of your favorite TV game show.

Play begins with a game board that lists six question categories, with five dollar amounts under each. Questions that lie under larger dollar amounts are more challenging. The first contestant chooses a category and a dollar amount. When the question (or rather, the answer) appears, if you press the space bar before your opponents can respond, you get 30 seconds to come up with the correct question to match the answer.

Appropriate phrases, such as "What is/are," "What was/were," "Who is/are," and "Who was/were," appear on the screen. Using your numeric keys, choose a phrase and complete it to form the correct response. If you are correct, you are awarded the dollar amount. If your response is incorrect, the dollar amount is subtracted from your score, and your opponents are given the



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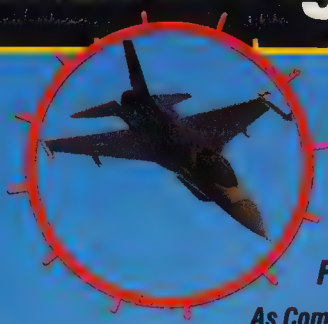

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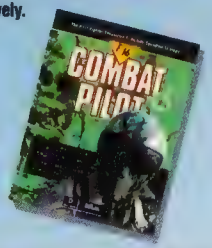

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chance to answer.

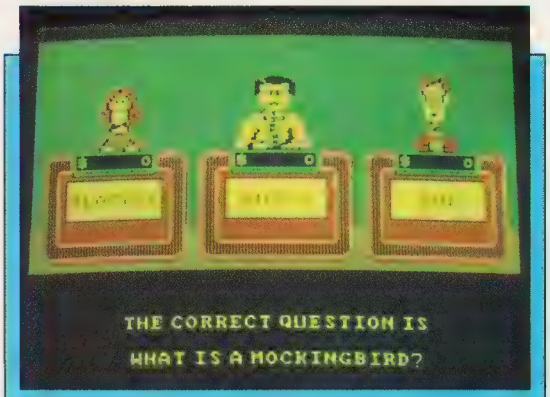
When you respond correctly, you control the board and can choose the next category and dollar amount. The program is complete with a Daily Double hidden in the first round and two Daily Doubles in the Double Jeopardy board.

When you get to Final Jeopardy, you are given a category; you then wager an amount and are given the Final Jeopardy question. If you answer correctly, your wager is added to your earnings. If you're wrong, the wager is subtracted. The player with the highest earnings has his or her name and dollar winnings entered into the champion's list. If you'd like to play again, you can return as the same character or choose a new one.

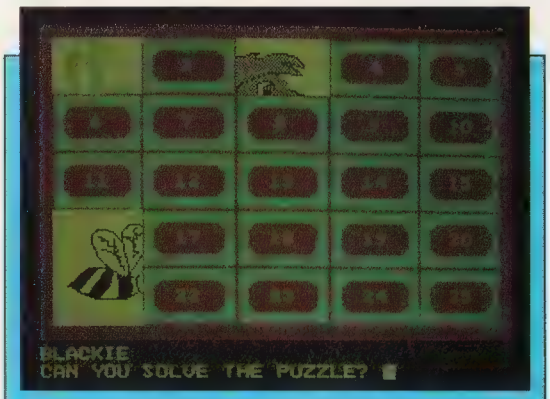
The program's graphics are good. Each character is distinct and has funny mannerisms. Some of the players are not good losers (or winners), just like their counterparts on television.

My only complaint about the game regards communications. Since the communications medium is not verbal, as it is in the television version, you need to type in your answer. *Jeopardy*'s programmer didn't take any variations in spelling into account when writing the game. Any misspellings entered will result in an incorrect response.

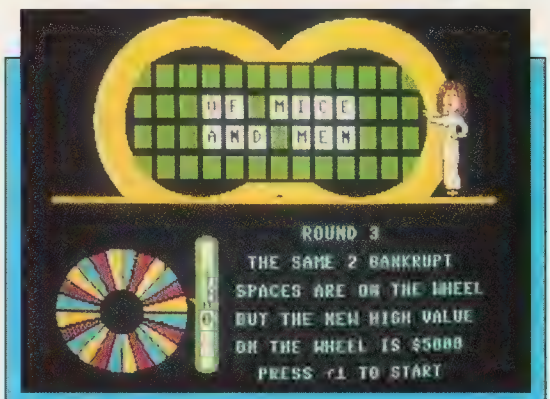
On more than one occasion, I typed in a correct response that happened to be spelled incorrectly. I was frustrated to find that, not only was I not awarded points for a correct response, points were subtracted from my score for the incorrect response, and my opponents were afforded the opportunity to answer the question. For example on the television show, contestants need not correctly spell out John McEnroe's name to answer a question properly. I, however, was penalized for having spelled it "MacEnroe." In another instance, I supplied the answer "Dolly Madison," which the computer wouldn't accept, looking instead for "Dolley Madison" (pickey, pickey program!). Try to think of it this way, however: this game has an added educational benefit in that it will force you to improve your spelling!



Jeopardy



Classic Concentration



Wheel of Fortune

Pair the Prizes

Classic Concentration (HGC/CGA, 256K, $12.99) is a fair copy of its television counterpart. ShareData uses the same graphics for this program that it used for *Jeopardy*. The characters are varied, as are their idiosyncrasies. They smirk, pout, gloat, and flip their lids as their blood pressure rises.

To set up the game, you are asked to choose your character's sex, and the program then offers four characters of that gender for you to choose from. When play begins, one block of a rebus puzzle (that is, one made up of words and pictures) is revealed. Players take turns moving the cursor keys to indicate two blocks, revealing a prize under each. If the prizes don't match, the blocks flip back to their original position. When you uncover two matching blocks, the prize is listed on the winnings board, and two more pieces of the puzzle are uncovered.

You are then asked to solve the puzzle. If you can't solve it at this time, you continue the turn and attempt to reveal two more matching prizes. You enter a guess if you think you can answer the puzzle. If you get it right, the game is over. If the guess is incorrect, your turn ends and it is now your opponent's turn.

The players attempt to win by uncovering matching prizes and revealing more of the puzzle. The player who solves the puzzle gets to play the final round. There are 15 squares, each containing the name of a car. The player must use the cursor keys to reveal all the matching pairs of cars within 35 seconds. There is an odd car hidden among the squares, without a match, to

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make it a little harder. Successfully matching all the cars within the allotted time "wins" the last car you matched. Regardless of whether you win the final round, your name and winnings appear on the champion's list.

I didn't find this game as entertaining as I'd hoped. Matching prizes behind blocks is not a very exciting task for an adult. Also, the rebus puzzles are simpler than those on the television version of this game. I didn't feel challenged while playing this game and didn't experience the addiction common to some other television game shows.

I'm a Wheel-Watcher

When I loaded ***Wheel of Fortune*** (HGC/CGA, 256K, $12.99), I was disappointed to find that I could not choose a picture character as I could in *Jeopardy* and *Classic Concentration*. I was asked to supply my character's name, which was entered onto a board. That's it; there are no characters to choose from and no amusing antics to watch in this game. When it was my turn, my character's name simply flashed. The only graphic character in the game is the hostess in the evening gown who uncovers the letters.

I also tried the ***Wheel of Fortune New Second Edition*** (HGC/CGA, 256K, $14.99) in search of ShareData's amusing characters, but they aren't there, either. In fact, other than new puzzles on the second edition, there is no difference between it and the original.

Game play in *Wheel of Fortune* is identical to the television game show. Masked-out letters conceal the name of a person, event, place, or thing. At the start of your turn, you can choose to spin the wheel, buy a vowel, or guess the puzzle. Once the wheel is spun, it stops at a dollar amount or a lose-a-turn or bankrupt spot. If it settles on a dollar value, you name a consonant and earn the dollar amount each time that particular letter appears in the puzzle. You are then given the opportunity to solve the puzzle. If you can't, the turn continues until you name a letter that doesn't appear in the puzzle, or the spin lands on lose-a-turn or bankrupt.

The player who successfully solves the puzzle gets to keep his or her earnings for that round. The other two players' earnings for that round are forfeited. There are three rounds of puzzles to be solved; after that, the player with the most winnings gets to play the bonus round. The player chooses five consonants and one vowel. Once they are revealed, the player has 30 seconds to solve the puzzle. When the bonus round is over, the winner's earnings are posted to the list of champions, and the game is over.

Wheel of Fortune is an addicting game. Even though some of the play, such as the wheel's outcome, is luck, there is still enough required of the player to make you want to keep trying *just one more time*. Next time, you tell yourself that you'll have better luck at the wheel, know what the puzzle is before anyone else, and win a little more money.

Survey Says...

I had fun playing ***Family Feud*** (HGC/CGA, 256K, $12.99). This game can be played in various configurations: several players compose one team versus the computer, several people compose two teams, or one person plays the game against the computer, as I played it. I was glad to see that ShareData's cute characters were back in this game.

You start by naming your five-member family. Play commences with a toss-up question, where a member from each family tries to guess the most popular response to a question. (The question had been posed earlier to 100 people; their responses were tallied to arrive at the survey results.) The family who guesses the more common response receives the opportunity to play or pass the play option to the other family.

The family that is in the play mode has to guess the remaining popular responses to the survey question before they hazard three incorrect (non-appearing) responses. If they successfully do so, they are awarded points for their correct responses. If they fail to list all the responses before their third wrong guess, the other family has a chance to regain the points by correctly venturing one guess.

Play continues for four rounds, with each family trying to accumulate as many points as possible. The winning family has a chance to participate in the bonus fast-money round, in which two of the family's members separately receive the same five survey questions. They must give a different answer to each question. When they have supplied the answers, the program informs them of how many of their answers corresponded to those of the survey's, and bonus points are awarded.

Family Feud, the computer game, comes very close to recreating the television version. Hillbilly music pipes away while the program loads and the families are named. The screen is reminiscent of the overhead survey boards in the television studio. And some of the survey questions (and answers) are bound to get a chuckle out of you.

Take a Guess

Card Sharks (HGC/CGA, 256K, $12.99) is one of the two computerized versions of television game shows that I had never seen before playing the computer version. With that in mind, I wanted to see how hard it would be to learn from scratch. I read the directions supplied with the game and formed a general idea of the play involved. By the time I had finished playing one round of this game, I had it down.

While the game loaded and I had the chance to name and pick my character, a musical theme played. I picked a knitting, bespectacled grandmother for my character and set out to play against a computer opponent.

The questions asked are reminiscent of *Family Feud*—a question was posed to 100 people, and you have to guess what percent had a certain answer to the question. Your opponent then guesses whether the actual response is higher or lower than your guess. Whoever is correct continues the turn and is presented with five cards in a horizontal row—the leftmost card is shown, while the others remain face down. You guess if the card to the right of the exposed one is higher or lower. When it is revealed, if you guessed incorrectly, your turn is over and your opponent is given the same scenario with his or her own row of cards to guess with. If you guess correctly, you have to guess if the second (now exposed) card is higher or lower than the third card, and so on, until all five cards are guessed correctly and revealed, winning that round for the player.

An option exists for you to freeze in the middle of your higher-lower guessing if a mid-range card, such as a 7, 8, or 9, is revealed. In this instance, your progress is frozen at the mid-range card, and the card-guessing round is

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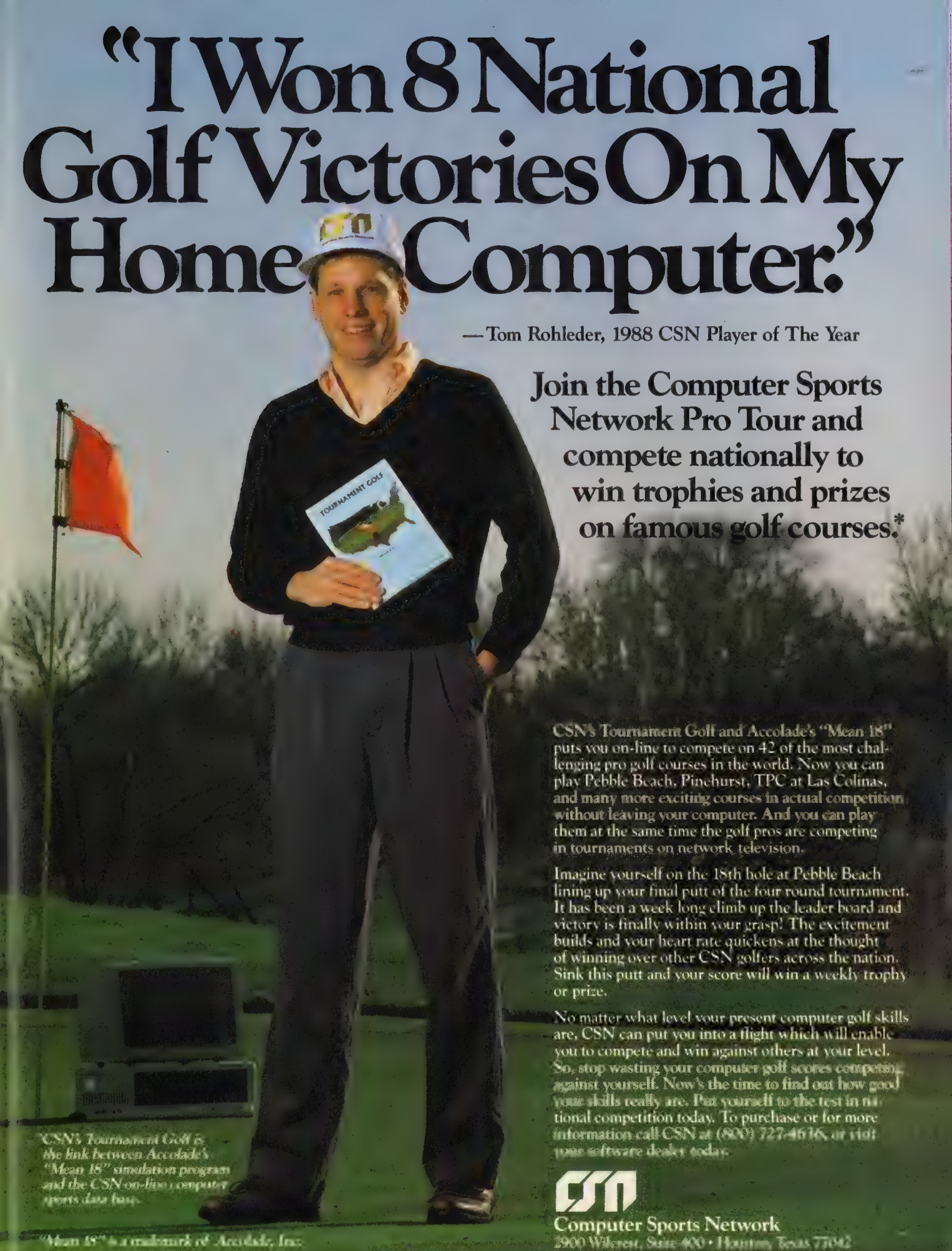

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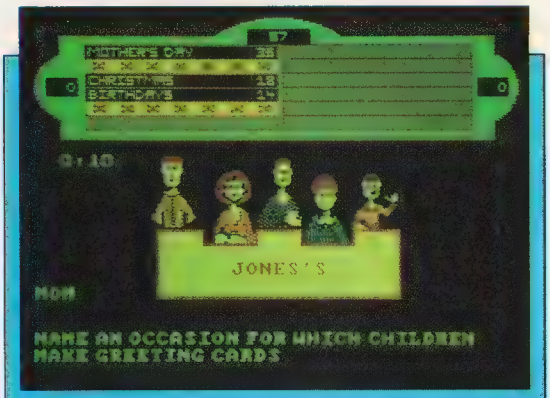
over, also denying your opponent the opportunity to guess at his or her cards. If you, as the player who froze the play, answer the next survey question correctly, thus continuing your turn, you are returned to the frozen place and afforded the opportunity to change your mid-range card for a new one. This option ensures that your sound guesses to that point are not forfeited.

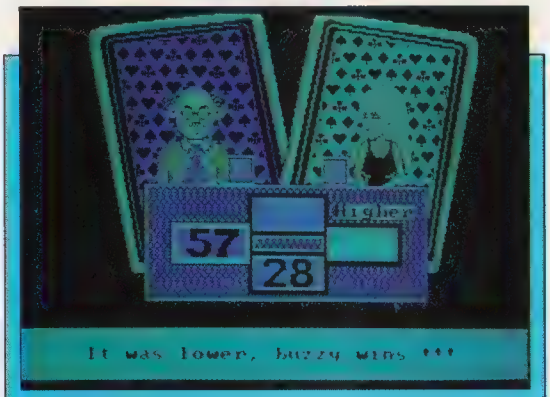
Play continues until a contestant wins two out of three rounds, advancing to the final round. Three rows of cards form a pyramid, all face down except for the bottom left card, and the player bets a dollar amount at every guess he or she makes. Once in each row he or she can choose to change a card. A player who can guess all the cards correctly without losing all of his or her betting money is then listed in the champion's roster.

Once I learned the basics of the game, I was able to work on strategy. You can improve your chances by wisely guessing the survey results. For instance, if you guessed that 99 percent of those surveyed had a certain response, your opponent has an excellent chance of being correct (and winning a turn) by guessing that the actual number was lower. It would be more prudent for you to guess at 50 percent, so that your opponent would have a fifty-fifty chance of being incorrect.

My only question about *Card Sharks* is this: What do survey results have to do with guessing higher and lower values for playing cards? It seems like the game developer had a good idea for the latter part of the game but didn't know what to do to get to that point, so he or she threw in a *Family Feud* element. That sticking point aside, it's a pleasant game.



Family Feud



Card Sharks

Win, Lose or Draw

The Big Drawing

Win, Lose or Draw (CGA, 256K, $12.95) from Hi-Tech Expressions isn't as much fun as I hoped it would be.

Like most of ShareData's games, *Win, Lose or Draw* uses music in the game, while loading and setting up the characters, and also as the game concludes. However, the tones are shrill and become bothersome very quickly.

Graphics are similar to ShareData's; there are picture characters that you choose and name. The characters have limited capabilities, but at least they're something to look at while playing the game.

For those of you who've never seen the game played on television, a brief explanation is in order. The game can be summed up as visual charades. One member of a team tries to get his or her teammates to guess a real or fictional name, place, title, or phrase by drawing pictures. The teammates keep guessing what the picture is until they call out the correct answer. The sooner they can guess an answer, the more points (dollars) are awarded to them.

You can play *Win, Lose or Draw* with two people or with one person versus the computer, as I played it. However, in this latter scenario, an interesting kink emerged. When it was my computer opponent's turn to guess, no guesses were ever entered, and his team did not score a single point. At the conclusion of each game I played, my score would be in the upper hundreds against my opponent's zero. Hi-Tech could have offered a real competitor as a computer opponent.

Another difference between *Win, Lose or Draw* and ShareData's titles was actual game play, to the disadvantage of *Win, Lose or Draw*. The game moved at a snail's pace. A long pause ensued after every play. If your guessing time to provide an answer expired, you waited several seconds for the correct answer to be supplied, and then you waited again for the opposing team to take its turn. As each picture was drawn, it took ten to

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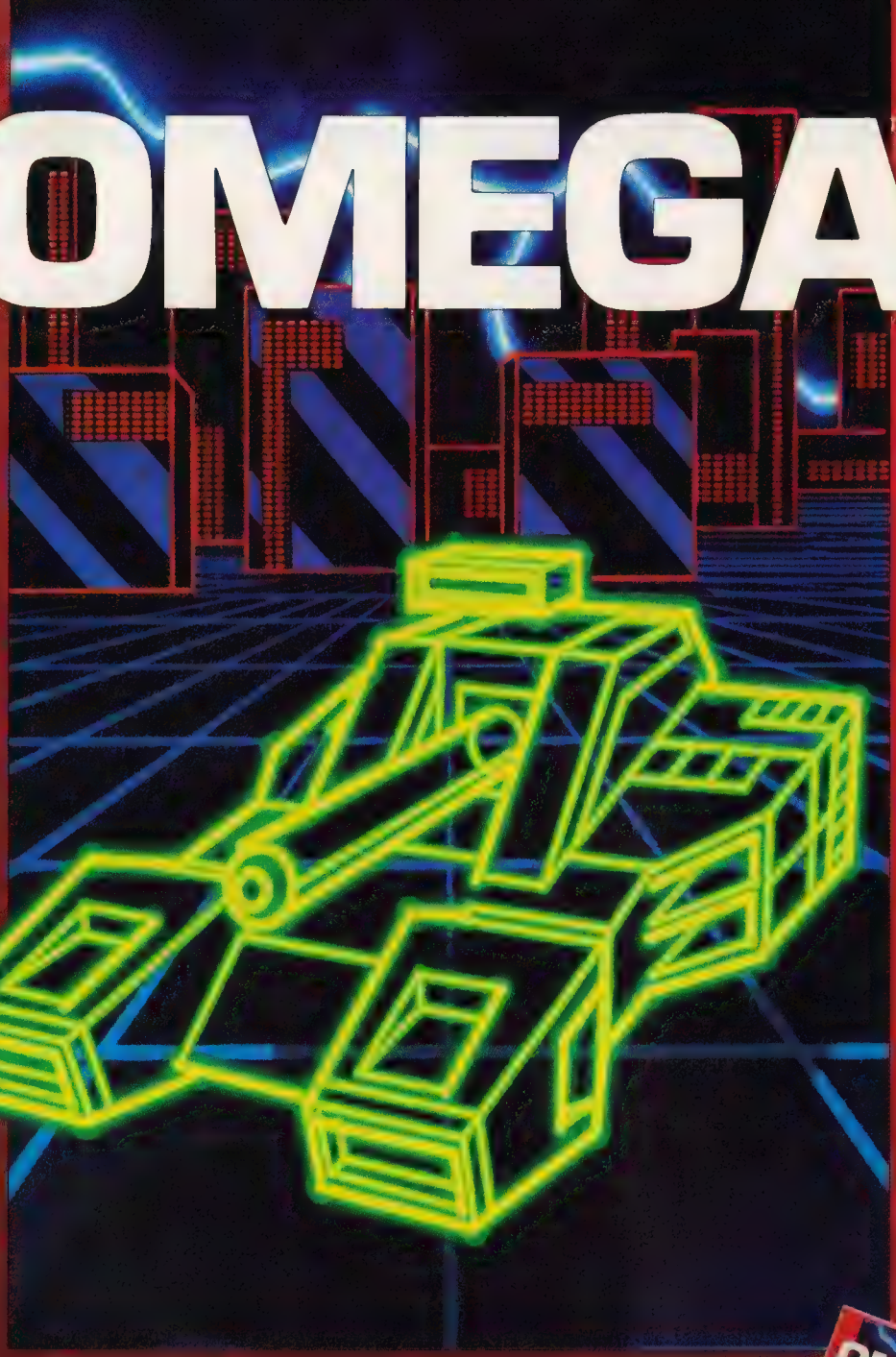

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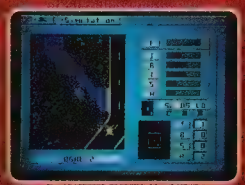

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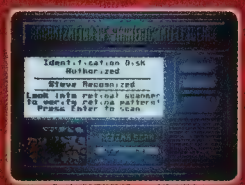

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fifteen seconds before the computer could draw anything recognizable. By the time I'd played two rounds. I had already lost interest in it.

If you're a real fan of the television game show, you might like Hi-Tech's *Win, Lose or Draw*, for a few rounds at least. If not, I'd advise you to pass this one over. It may be an inexpensive game to add to your shelf, but that's probably where it will sit—permanently—before long.

Squaring Off

Hollywood Squares (CGA, 256K, $14.95) from GameTek is a faithful reproduction of the popular television game of the same name, right down to the witty one-liners the "stars" deliver.

Animation is limited in this game because of the simple CGA-only graphics; a few smiles, frowns, and grimaces are about all you'll get, but that doesn't detract from the game because graphics aren't an integral part of it. The keyboard interface is simple with a menu of responses to pick from.

Two games of celebrity-style tic-tac-toe, plus a bonus game in between, with a chance at the "Secret Square," make up each round of game play. After that, the winner gets to try his or her luck at winning a car (computerized only, unfortunately). Choose the sports car, the luxury sedan, or the convertible—if the key fits, you "own" it.

When you start to play, you decide whether to play against another person or the computer. (*Hollywood Squares* provides a computer opponent named Microkid. Unfortunately, he's no whiz kid—I beat him every time.) Just like on television, you pick your square, then try to decide if the celebrity who occupies it is answering the question properly. By agreeing or disagreeing, you win or lose the square in question. You have to decide, for example, if *Good Housekeeping* magazine would advise a businesswoman to entertain male colleagues in her hotel room. (And chuckle at the jokes this question prompts.) It's just as you remember. And you find yourself getting very involved, debating with yourself on what to answer, and arguing with the program when it disagrees with you. (Of course, arguing with a computer screen is like arguing with the television screen—neither one does much good.)

This is definitely not a children's game—the humor is too adult in theme. A case in point: "Can you get anything by trying to mate a pheasant with a chicken?" "Usually a room full of feathers and some great snapshots." For teenagers and adults, however, this game can be plenty of fun.

Hollywood Squares has several handy features. After you load the program, you select a speed setting on a scale of 1 to 6. (Setting it at 6 helps a standard-speed PC perform quickly.) This system works; the program responds quickly, without any irritating waits between questions. You can also keep track of your best scores, since the program records the Top Ten.

The only problem I had with this program was its occasional inability to respond to a command. Sometimes I had to hit a key three times before the program would do anything.

This minor problem aside, *Hollywood Squares* is entertaining enough to keep you happy as you struggle to outguess the "stars" of your computer screen. It will definitely hold your interest for more than one game.

Double Trouble

Double Dare (CGA, 256K, $14.95) from GameTek will be less familiar to many players than the other games discussed here. *Double Dare*, which has found fame on the cable MTV network and syndication on other channels, is the game today's teenagers will probably remember with nostalgia.

Double Dare's concept is simple. Your "team" takes on another team in a game that tries to test both your coordination and your mastery of trivia.

You start with a so-called physical challenge to determine who will control the game. This challenge might be golfing with raw eggs, for example. The first team to sink a predetermined number of these putts goes first in the trivia section of the game. These physical sections of the game use a power meter or "thermometer" interface much like the one Accolade used in its famous *Mean 18* golf game.

Double Dare's trivia questions run the gamut, ranging from historical topics to sports, popular culture to literature. Since the right answer is provided when you trip up, you learn as you go.

Once the trivia starts, the player answering questions can pass on a question by daring his or her opponent. If dared, you can answer the question or counter by double daring. Double daring forces your opponent—the one originally faced with the question—to take on another physical challenge.

These physical challenges are the essence of the television version of *Double Dare*; the game revolves around them. The computer version follows suit, with less effective results. Unfortunately, the kind of stunts that made this game famous are impossible to recreate on a computer screen. On the television show, contestants might be asked to dive into a vat of hot fudge, certainly a sensation impossible to replicate here! Even the less bizarre stunts lose their zany appeal on computer—the screen tells you you're trying to golf with eggs, for example, but it's still just a test of finger coordination, especially considering the limitations of CGA graphics.

Additionally, I found the obstacle course that concludes the game nearly impossible to negotiate. Part of the fault with that might lie in the documentation—the instructions are explained *too* succinctly on one 4- by 5-inch sheet of paper. (To be fair, there are instructions on both sides of that sheet.)

On the plus side, *Double Dare* should be popular with children. Since all the questions are multiple-choice, it will be easier for them to play, which will help them stay interested in the game.

I find *Double Dare*'s appeal limited; I don't think it has the staying power to make you an addict. Fans of the television game may disagree, however. Certainly playing this game regularly will boost your trivia quotient and maybe even help your computer golf game!

The Final Round

All the games that I reviewed were, at the least, entertaining. Some were a bit elementary; others were challenging. I'm sure everyone has a favorite. These computer versions should meet with your approval if you're already a fan of the television game show. And just like their television counterparts, they're meant to be fun diversions—no heavy time involvements, no cumbersome manuals to master, and no real risks.

—Lydia Veale

Lydia Veale is the former assistant editor of PCGames *and is currently sharpening her game show skills in the company of her new daughter.*

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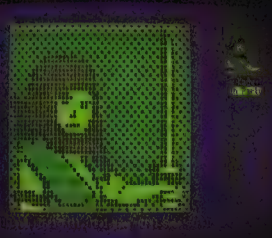

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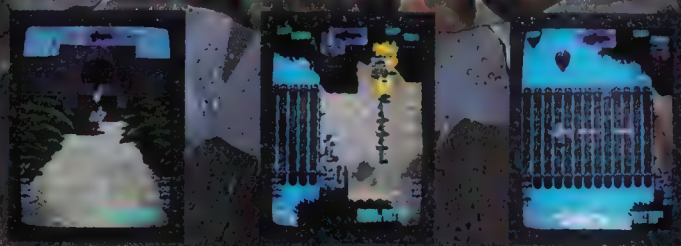

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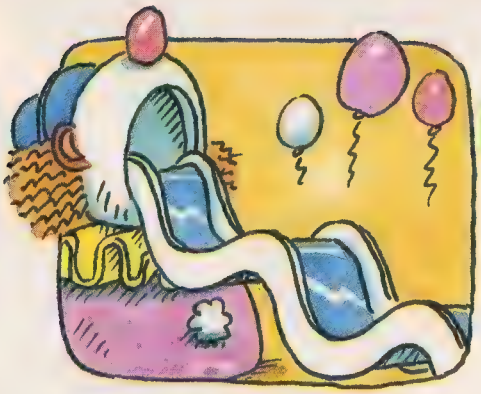
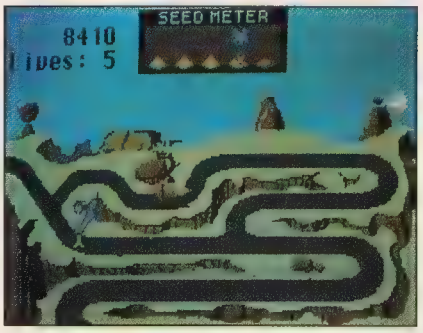


the fun house

The Fun House is a new section of the magazine in which we bring you brief reviews of games our editors and authors have been playing.

Road Runner

512K, CGA/EGA, $39.95.



Playing Mindscape's ***Road Runner*** is like being a kid again. The graphics are good, the theme song sounds just like on TV, and Wile E. Coyote never gives up the chase. The object of this arcade game is simple: you cover long stretches of hilly and winding terrain, picking up birdseed and avoiding the coyote as you go. The more strenuous the terrain, the more important it is to get every bit of birdseed—without it you lose the energy to run and Wile E. carries you away.

You can get additional points for steering the coyote into the path of destruction and bonuses for getting all the birdseed. Wile E. will use skateboards, pogo sticks, and jet rockets to pursue you, forcing you to plan accordingly.

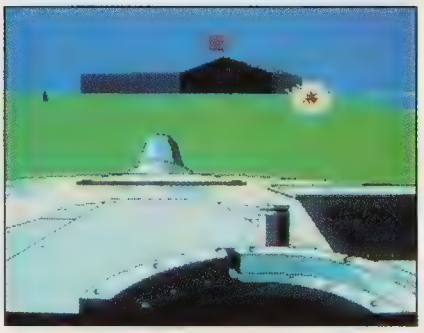
Unfortunately, ***Road Runner*** suffers from one major flaw: when you finish one game and want to start another, or even try to progress to the next level, you wait more than a minute (on a 4.77-MHz PC) for the program to reload.

Once you get around that, you'll enjoy ***Road Runner***.

—Pat Payne

Abrams Battle Tank

512K, HGC/CGA/EGA, $44.95.



Playing ***Abrams Battle Tank*** from Electronic Arts simulates the many factors you'd face as a tank commander, from choosing the weapons you'll carry to planning how to attack your objectives. It offers a nice combination of strategy and action, and you can complete one of the eight scenarios in 20 minutes or so. However, play isn't simple, and you'll need the information in the 42-page manual to play well.

The game offers plenty of action and challenging strategy but doesn't demand hours of play, unless you attempt the full campaign, consisting of all eight scenarios. Although it supports a joystick, you still use some keyboard commands to control your tank—jumping from joystick to keyboard is a nuisance.

Graphics are ***Abrams Battle Tank***'s weak suit when it's played in Hercules and CGA modes; objects, particularly those near the horizon, are hard to distinguish—a serious handicap in the heat of battle. This would be a much better game if it were easier to see what's happening on screen. A nice touch, though: as you drive your tank, the screen bobs up and down, as if you're actually driving over uneven ground.

—Mark Reynolds

Dr. Doom's Revenge

512K, CGA/T16/EGA, $44.95.

Dr. Doom's Revenge from Medalist Software (MicroProse) uses a comic-book format as the basis for an exciting arcade game. The arcade sequences are great—you'll take turns playing Spider-Man and Captain America as they fight to get into Dr. Doom's castle. Both have a variety of distinctive moves, like Spider-Man's whirling web shot. And the same command will produce different moves, depending on your character's proximity to his opponent. (If you play without a joystick, I hope you have *very* quick fingers.)

Unfortunately, the game runs very slowly, at least on an 8086-based computer, and it's almost impossible to play without a hard disk. To get to the arcade action—where all the fun is—you read a page of a comic book recreated on screen, then jump into the action it describes. That's a time-consuming process for your PC, and you'll be left waiting impatiently while it "thinks." The game's CGA graphics are more than acceptable—don't worry if you don't have EGA graphics.

This is a fun game, but be prepared for some long waits between the adventures.

—Pat Payne

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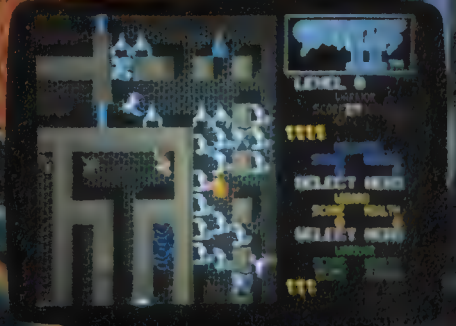

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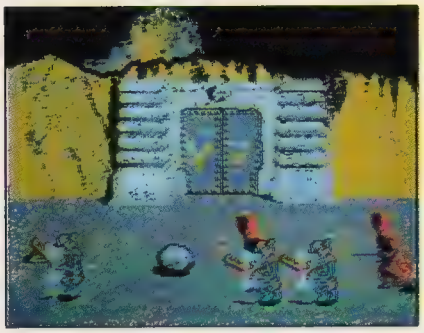


War in Middle Earth

384K, CGA/T16/EGA, $59.99.

Melbourne House's ***War in Middle Earth*** recreates J.R.R. Tolkien's popular *Lord of the Rings* trilogy. The game is played on three levels: the map level shows all the forces; the campaign level gives you a detailed view of the map, showing individual forces and letting you direct them; and the animation level focuses on one party. Most of the action takes place on the latter two levels.

War in Middle Earth combines very nicely animated scenes on the animation level with a strategy war game approach on the campaign level. In order to collect objects, you must be on the animation level. The action moves slowly here if you don't have a mouse or joystick. Expect some frustration, since scrolling is intermittent and slow.

On the campaign level, where you spend most of your time, you control your forces by pointing to where you want to go. It's frustrating watching your forces walk in the wrong direction or forget what they were doing. The computer is supposed to move the forces to their destinations, but it's often necessary to "walk" a group around obstacles.

Tolkien fans will enjoy this game's attention to detail and faithfulness to the books, but many game players will look to other games for more strategic challenge.

—Guy Wright

Silpheed

512K, CGA/T16/EGA/MCGA/VGA, $34.95.

This latest from Sierra On-Line is one of the most immediately likable games you'll ever find. A space battle "super dogfighter" game imported from Japan and ported to MS-DOS, ***Silpheed*** challenges you to fight through 20 levels to save the Milky Way Union from the brutal outlaw leader Xacalite and his battleship Gloire.

The action is fast-paced in this arcade-style game. Each new level brings tougher enemies, as you become more powerful as well. You gain strength by killing strategically marked enemies, and the brief moments of invincibility you can earn make life worth living.

Silpheed features copy protection in the form of random matching: an enemy appears on the screen, and you must refer to your book to identify it. If unsuccessful the game chides you for being unworthy and blasts you back into MS-DOS.

Silpheed supports the Ad Lib music board, the Roland MT-32 synthesizer, and the IBM sound card; any of these sound cards will enhance the atmosphere and make the pre-game remarks of a fearsome-looking android intelligible; most players will dispense with the android, though, and move right into the battle.

—Roger Strukhoff

Hole-In-One Miniature Golf

256K, HGC/CGA/T16/EGA/MCGA/VGA, $34.95.

New from DigiTek Software, ***Hole-In-One Miniature Golf*** simulates miniature golf for up to four players, featuring five 18-hole courses: Tutorial; The Classics, Intermediate, and Expert courses, which include traditional mini-golf holes and a wild variety of tubes, tunnels, traps, and teleporters; and Fantasy, with upside-down holes, deserts, haunted mansions, and a pinball machine—the imaginative screens must be seen to be appreciated.

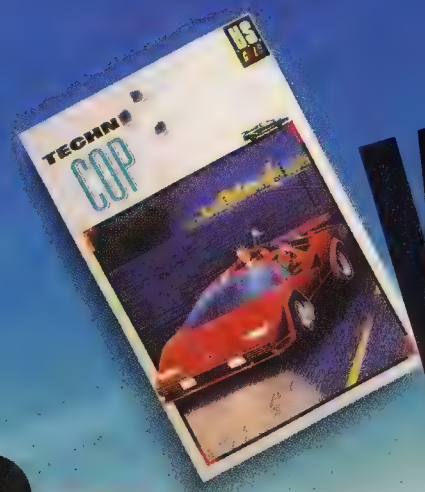
Play is simple: place the ball on the start pad with the keyboard, mouse, or joystick; pull a rubber-band line in the direction you want the ball to go (the length determines the strength of the shot); and press again to take the shot. Go three strokes over par and you get penalized a stroke and sent on to the next hole.

You can get contour views from up, down, right, or left to help you estimate the steepness of hills. A Replay option lets you admire your last shot again, and the Retry feature available in practice mode is every golfer's dream: a chance to take the shot over.

More fun than the game it simulates, *Hole-In-One* has great graphics and lively animation. A winner.

—Bud Sadler

KILLER



Technocop. You're bad. You're cool. You're part of the Enforcers, a high-tech police task force. And it's up to you to take down the sleazeball members of an organized crime empire and restore safety to the city.

Your weapons? An .88 Magnum (it's twice the size of Harry's), a snare gun, a criminal radar locator and a computer wrist watch. And that's just on you. Your car (a V-Max, the baddest thing on wheels) is equipped with rapid fire machine guns, killer bombs, a crime computer and turbo acceleration.

Your mission? Race down savage highways and blow away punks. Check out seedy buildings where rats and thugs are buddies. If you're tough enough to survive, then it's back in the V-Max and on to the next crime scene.

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PRESUMED GUILTY

256K, CGA/EGA, $29.95.

Cosmi's ***Presumed Guilty*** is an exciting, sometimes-graphic mystery adventure that's sure to hold your interest. In it, you'll face a computer within a computer: you're the newest investigator for COPNET, a computerized "policing system." Via COPNET, you'll send and receive messages (both friendly and unfriendly) and search the database for clues (by way of digitized photos, documents, and even DNA analysis).

The mystery unfolds as you play: the year is 1996, an American scientist working on classified projects has been killed, and you are assigned to the case. Soon you begin to receive threatening messages from "The Falcon," warning that you will be framed as the scientist's murderer. From there, you'll struggle to solve the mystery, proving your own innocence in the process. Since you've been "presumed guilty" by your superiors, it's an uphill battle.

Presumed Guilty is a lot of fun. Its "computer terminal" interface communicates information as events happen, so it's very fast-paced. This unusual interface works; you really feel like you're tied in to a vast mainframe, struggling to search out the information you need to save your life. And since you receive messages, reports, and other data as the game progresses, you're not likely to get stuck and be unable to go any further—information keeps coming in with or without your input, so something will come along to give you a new idea and get you started again.

I recommend it.

—Pat Payne

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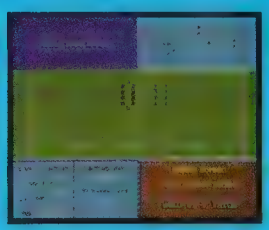
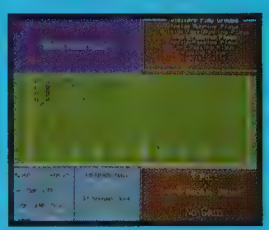


Actual EGA Screens



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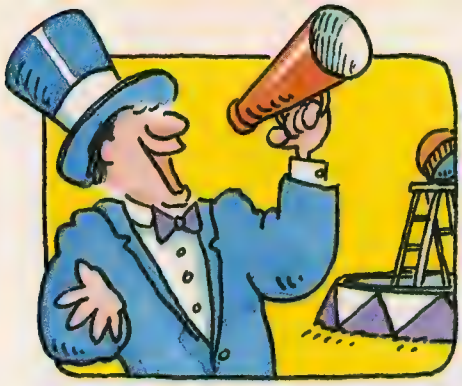


the big top

In the following pages, you'll find a guide to all the new PC games shipped since our last issue, along with all the important facts about those games. We hope you'll find it helpful as you make out your shopping list.

All the games in this buyer's guide are listed under the following categories: **Arcade**, **Sports**, **Adventure**, **Fantasy**, **Vehicles**, and **Strategy**. Other kinds of games are listed under **Miscellaneous.**

ARCADE

TITLE	COMPANY	MEMORY	GRAPHICS MODE						HARDWARE			DISK SIZE		COPY PROTECTION	PRICE
			HERC	CGA	T16	MCGA	EGA	VGA	JOY	MSE	HD	5¼"	3½"		
Airball	Microdeal	640K		●			●	●	●			●	●		$39.95
Barbarian	Melbourne House	384K	●	●		●	●	●	●	●		●	●		$39.99
Moraff's Revenge	Moraffware	256K	●	●								●			$10.00
Out Run	Mindscape	512K		●	●	●	●	●	●			●	●	Master	$39.95
Pole Position II	Mindscape	256K		●			●		●			●			$24.95
Quadralien	Spinnaker	512K		●		●		●		●		●	●	Documentation	$39.95
Renegade	Taito	512K	●	●	●		●	●	●			●	●	Disk	$37.95
Silpheed	Sierra On-Line	512K		●	●	●	●	●	●			●	●	Documentation	$34.95
Sky Shark	Taito	512K	●	●			●	●	●	●		●	●	Disk	$37.95
Stargoose	Spinnaker	512K		●			●			●		●	●	Documentation	$39.95

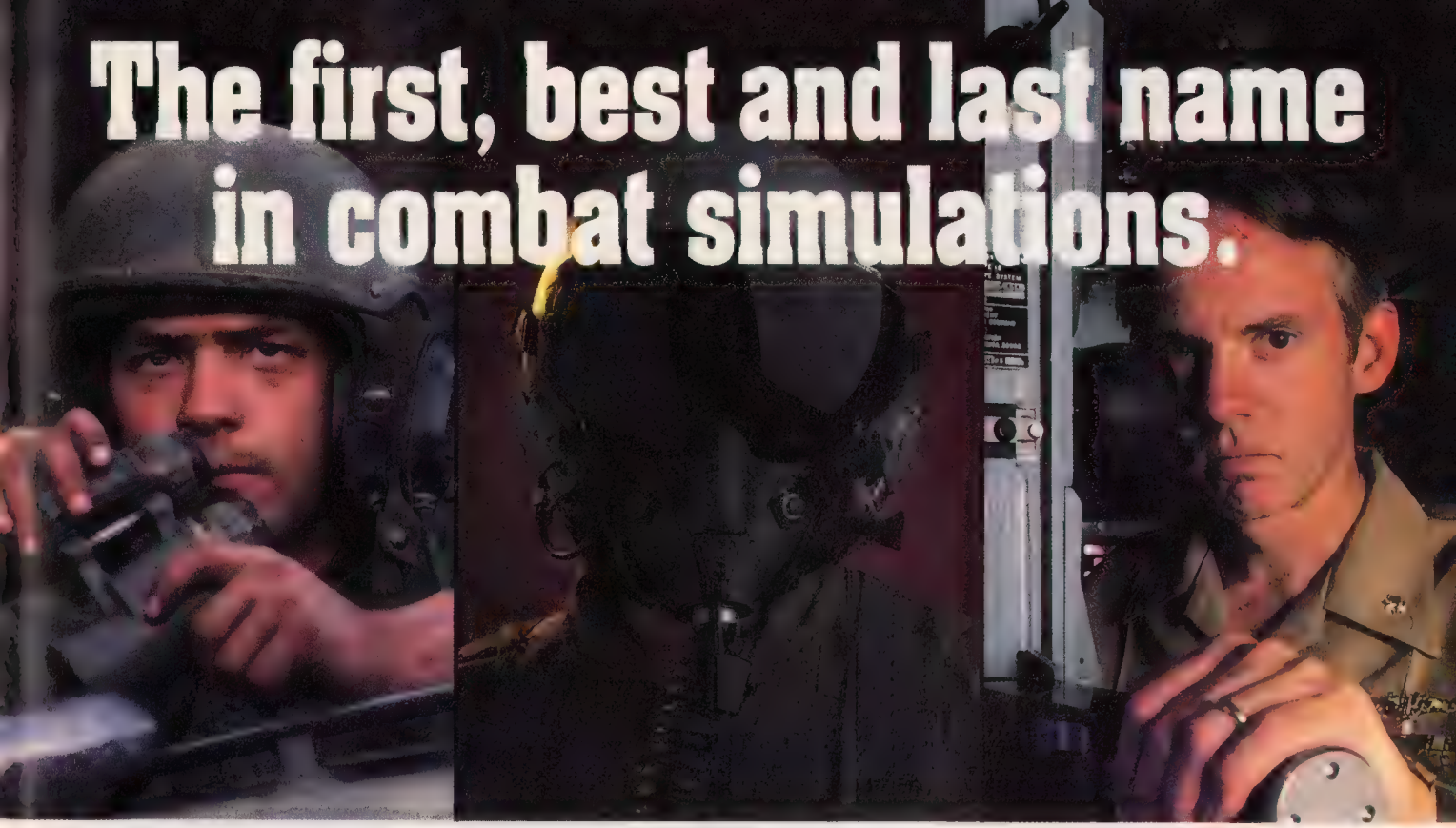
SPORTS

TITLE	COMPANY	MEMORY	GRAPHICS MODE						HARDWARE			DISK SIZE		COPY PROTECTION	PRICE
			HERC	CGA	T16	MCGA	EGA	VGA	JOY	MSE	HD	5¼"	3½"		
California Pro Golf	Mastertronic	256K		●	●		●		●			●	●		$14.99
Earl Weaver Baseball 1.5	Electronic Arts	384K		●	●		●		●	●		●	●	Documentation	$44.95
Earl Weaver Baseball 1.5 Commissioner's Disk	Electronic Arts	384K		●	●		●		●	●		●		Documentation	$19.95
Earl Weaver Baseball 1.5 MLBPA Player Stats	Electronic Arts	384K		●	●		●		●	●		●		Documentation	$19.95
Hole-In-One Miniature Golf	DigiTek Software	256K	●	●	●	●	●	●	●	●		●	●	Disk	$34.95
Jack Nicklaus Course Disk Vol. 1	Accolade	384K	●	●	●		●					●	●AV	Documentation	$19.95
Magic Johnson's Basketball	Melbourne House	512K		●	●	●	●		●			●	●		$39.99
Micro League Baseball II	Micro League Sports Association	384K	●	●			●					●	●AV	Master	$49.95
Reel Fish'n	Interstel (EA)	384K		●			●		●	●		●	●		$49.95
Speedball	Cinemaware	512K		●	●		●		●			●	●		$39.95
Tournament Golf (for Mean 18)	Computer Sports Network	512K		●		●						●	●		$49.95
Tournament Courses, Volumes 1–6 (for Mean 18)	Computer Sports Network	512K		●		●						●	●		$59.95
World Karate Championship	Epyx	256K		●					●			●		Master	$19.95

ADVENTURE

TITLE	COMPANY	MEMORY	GRAPHICS MODE						HARDWARE			DISK SIZE		COPY PROTECTION	PRICE
			HERC	CGA	T16	MCGA	EGA	VGA	JOY	MSE	HD	5¼"	3½"		
Capone	Actionware	512K		●			●		●R	●R		●	●	Documentation	$44.95
Combat Course	Mindscape	512K		●			●		●			●	●	Disk	$34.95
Demon Stalker	Electronic Arts	512K		●	●	●			●			●	●		$39.95
Dr. Doom's Revenge	Medalist (MicroProse)	512K		●	●		●		●			●	●AV	Master/Doc	$44.95
Indiana Jones and the Temple of Doom	Mindscape	512K		●	●		●		●			●	●	Documentation	$39.95
Legacy of the Ancients	Electronic Arts	384K		●								●	●AV		$29.95
Space Quest III: The Pirates of Pestulon	Sierra On-Line	512K	●	●	●	●	●	●			●R	●	●		$59.95
Street Fighting Man	Mastertronic	256K		●	●		●		●			●	●		$14.99

The first, best and last name in combat simulations.



M1 TANK PLATOON: The only tank combat game that lets you perform real-life combat maneuvers! You'll lead not one, but four tanks and sixteen men—a whole tank platoon—into battle with the Soviets!

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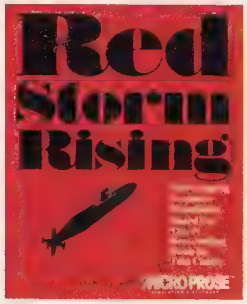
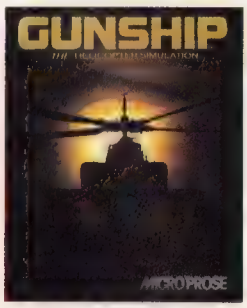


RED STORM RISING: War erupts between NATO and the Warsaw Pact! Trouble runs deep as you lead an American nuclear attack submarine into battle against a barrage of Soviet ships, subs and helicopters!

F-19 STEALTH FIGHTER: Pilot the Air Force's top secret, radar-elusive jet. Strike and roar away before they knew you're there! This one revolutionized computer game technology with new perspectives and dazzling Super 3-D Graphics.

F-15 STRIKE EAGLE II: The action-packed sequel to the classic jet combat game that sold a million copies! Hundreds of real-world combat missions, incredible animation and new breakthroughs in game design promise hours and hours of thrill-packed play!



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FANTASY

TITLE	COMPANY	MEMORY	GRAPHICS MODE						HARDWARE			DISK SIZE		COPY PROTECTION	PRICE
			HERC	CGA	T16	MCGA	EGA	VGA	JOY	MSE	HD	5¼"	3½"		
Crack of Doom, The	Addison-Wesley	128K		●			●					●			$39.95
Demon's Winter	Strategic Simulations	384K		●			●					●		Documentation	$39.95
Might and Magic II	New World Computing	384K	●	●	●	●	●					●	●AV	Master	$49.95

VEHICLES

TITLE	COMPANY	MEMORY	GRAPHICS MODE						HARDWARE			DISK SIZE		COPY PROTECTION	PRICE
			HERC	CGA	T16	MCGA	EGA	VGA	JOY	MSE	HD	5¼"	3½"		
Abrams Battle Tank	Electronic Arts	512K	●	●			●		●			●	●		$44.95
First Over Germany	Strategic Simulations	384K		●			●					●		Documentation	$49.95
Heavy Metal	Access	384K	●	●	●		●		●			●		Documentation	$44.95
Lombard RAC Rally	Top Ten Software	512K		●			●					●	●	Disk	$39.95
Steel Thunder	Accolade	384K	●	●	●	●	●	●	●			●	●AV	Documentation	$39.95
Turbo Champions	Mastertronic	256K		●			●		●			●	●		$ 9.99

STRATEGY

TITLE	COMPANY	MEMORY	GRAPHICS MODE						HARDWARE			DISK SIZE		COPY PROTECTION	PRICE
			HERC	CGA	T16	MCGA	EGA	VGA	JOY	MSE	HD	5¼"	3½"		
Hidden Agenda	Springboard Software	512K		●								●	●AV		$59.95
Modem Wars	Electronic Arts	384K	●	●	●		●	●	●	●		●	●	Documentation	$39.95
Red Storm Rising	MicroProse	384K	●	●		●	●	●	●			●	●	Master/Doc	$54.95

MISCELLANEOUS

TITLE	COMPANY	MEMORY	GRAPHICS MODE						HARDWARE			DISK SIZE		COPY PROTECTION	PRICE
			HERC	CGA	T16	MCGA	EGA	VGA	JOY	MSE	HD	5¼"	3½"		
Chess	Scandinavian PC Systems	256K								●		●	●		$34.95
Cutthroat Hearts	Manhattan Software	64K	●	●								●	●		$35.00
Figment: The Imagination Processor	Patch Panel Software	384K										●	●AV		$95.00
Liberty Bell Slot	TechStaff	448K								●		●	●		$14.95
Omni-Play Horse Racing	SportTime (Brøderbund)	256K		●			●		●			●		Documentation	$49.95
Pool	HeartLand Software	256K	●	●			●					●	●AV		$39.95
Slots & Cards	Microdeal	256K		●			●					●	●		$39.95

COMPANY: (EA) = distributed by Electronic Arts.

MEMORY: RAM needed to run program. When RAM requirements vary with graphics mode, the highest number is listed.

GRAPHICS MODE: graphics standards the program will take advantage of (as opposed to merely operating in) to their fullest extent. (For example, text programs don't take advantage of any graphics mode.) HERC = Hercules graphics card, CGA = color graphics adapter, T16 = Tandy 16-color graphics, EGA = enhanced graphics adapter, MCGA = multicolor graphics array, and VGA = video graphics array.

HARDWARE: JOY = joystick, MSE = mouse, HD = hard disk. Devices noted with R are required.

DISK SIZE: AV = available by order only; may be an additional charge.

PRICE: suggested retail cost; discounts often available. When price varies with packaging (i.e., to get a 3½-inch disk you must purchase a more expensive combo pack), the highest price is listed.

COPY PROTECTION: DISK = disk may be copied, leaving original disk useless until the program is reinstalled; DOCUMENTATION = you can't play until you provide information found in the manual; MASTER = you must insert original game disk in order in play; MASTER/DOC = a combination of these two kinds of copy protection.

Please note: The information listed in this buyer's guide is largely provided by the games' manufacturers. It is, therefore, sometimes subject to error and change.

UNLOCK GAMEMASTER *New Version 2.0*

Like many of you, I get frustrated by copy protected software. The schemes either require my manual, my original floppy, a hardware device plugged into the back of my machine, or an installation on my hard disk that places hidden files and no longer allows me to make backups or to optimize my hard disk without risking losing my installed copies. When I want to run a program I want to do it right now from my hard disk, and when I want to take a copy home for my machine at home or place a copy on my portable computer to use on the road, I don't want to be hampered. I'll bet that you don't either. That's why we developed UNlock. We were the first to remove copy protection from programs, not just make BIT copies on another diskette. Sure, some of our competitors have tried to copy us, but no-one does it as well, forget about better! You don't have to take my

word for it. Check out PC Magazine's evaluation. PC Magazine selected as their editor's choice UNlock MasterKey (for business software) against all of the competition.

Being the best copy protection breakers for business software led to numerous customers asking us to please include games in our future plans. We listened, and produced UNlock GameMaster! Over the last year and a half we have continued to expand GameMaster with the release of each new game. We have released a new version every quarter. The PC Game market has been exploding with more new games being released every month. And the games keep getting better. The result is you wanted new versions of GameMaster sooner. We had a problem. It is too expensive for a small company like ours to produce new versions of the program any faster than quarterly.

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HINT

We understood your frustration and decided to do something about it. The result is UNlock GameMaster version 2.0. It is not only new, it is unique. Starting with version 2.0, the standard *base* of programs will remain constant. Future versions of the program will only be released when a completely new and different method of copy protection is encountered requiring a change to the **core** program. All other "upgrades" (called INSERTs) consist of adding new programs or additional versions of exisitng programs to the *base* menu of breakable programs. This is our new INSTANT UPDATE feature. These upgrades can be added to the *base* program by you the user. All you need to do is order the new module from us. The **core** program contains an **Upgrade Editor** which allows you to add new programs, or new version of existing programs to your *base*. The INSERTs can be given to you verbally over the phone, FAX'ed to you, or mailed to you to be typed into your program. The new program is then added automatically to your menu and you are ready to

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break it. New games will be available as fast as PCEasy can get a copy and break it. You don't have to wait for new releases, just call and order- if we've done it you get it immediately. Best-of-all you only pay for what you want and need. Each program INSERT is only $5.00. Other new features include a completely new and simpler user interface with much nicer on screen graphics and on-line help which is context sensitive. The program will now help you when it encounters unexpected problems, as well as through many of the more common user problems.

So go ahead, buy your game, then give us a call, only $5.00 has you on your way to greater enjoyment. Better yet, buy your games from us and we'll only charge you $2.50 per INSERT with each game you buy. We stock only the "best" games and offer them at competitive prices.

UNlock GameMaster ver 2.0 is only **$60.00**for the base program in the U.S. and $75.00 for Foreign. To order by phone today call **(305) 566-6150** or FAX your order to **(305) 566-6135**. we accept

Visa, MasterCard and American Express. Or send your check or money order to PCEasy, Inc. 830 E. Oakland Park Blvd., Suite 104, Ft. Lauderdale, FL 33334. **Circle 84 on Reader Service card.**

UNlock GameMaster requires an IBM PC or compatible and DOS 2.1 through 3.x and 256K or RAM, two floppy drives or a floppy and a hard disk.

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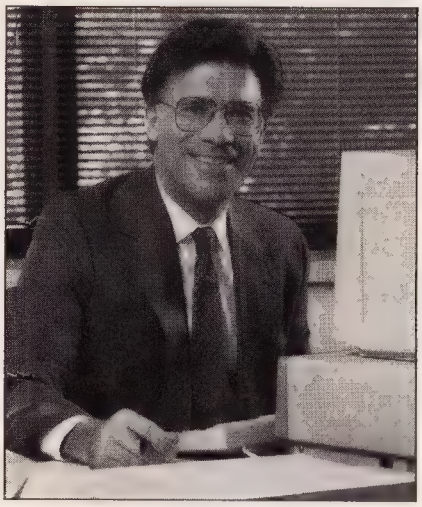

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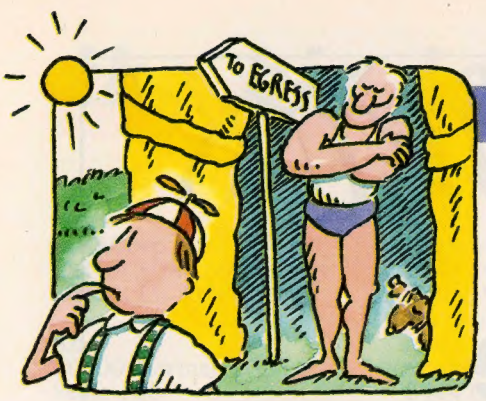

Driving Styles of the Rich and Famous

While researching this issue's cover feature, it became obvious to me that the main reason for the recent popularity of driving simulations is that they represent a fantasy-come-true for people like you and me who drive rusty rice-burners and assorted Detroit detritus. These games provide an opportunity for us to experience the thrill of driving exotic, powerful cars that cost more than the gross national product of many third-world countries.

But, believe it or not, there are people in this world who really *do* drive the kinds of cars these simulators simulate, and I'm sure they get no kick at all from *Vette!* or *The Duel*. For this small but untapped market I have created *Lemon Emulator*, the first simulation that lets the well-to-do experience driving the kind of wreckage the rest of us do.

Lemon Emulator lets you choose from a menu of six classic cars, each of which represents a model that I have personally owned and operated, so I can vouch for the authenticity of its performance characteristics. The choices include:

1955 Olds Delta 88—This *was* my father's Oldsmobile, a massive brute that could have breached the Maginot Line if it had been around forty years sooner.

1964 Mercury Comet—Could go from zero to sixty in 4.8 seconds, but only if driven off a cliff, which is what eventually happened to it.

1964 Ford Galaxie 500—Never went from zero to sixty in its life, because at precisely 50 mph it would start vibrating with a ferocity that would make the coins in your pocket jingle.

1965 Ford F100 pickup—The pride of the fleet. Okay, I'll admit it may have looked like the sixth-place finisher in a Demolition Derby, but in fact it took fourth.

1972 Volkswagen bug—By the time this insect went to the Great Roach Motel in the Sky, more than half its mass consisted of metal real estate signs popriveted over rust holes; the rest was made up of duct tape.

1977 Chevy Caprice station wagon—The newspaper ad said, "25 mpg, AC, pb/ps/pw." Only after buying it did I find out this meant "25 missing pieces and gizmos, awfully corroded, pretty beat-up/possibly salvageable/probably wrecked."

Now even the fabulously wealthy can know the incredible thrill of driving a real wreck.

Besides the basic accelerate, brake, and turn commands that are standard in most driving games, there are special key combinations that let you perform the more precise driving operations required by these vehicles. For example, pressing K ("kick") means kick the tires (all models), Shift-K means kick the shift lever (to get it into gear; recommended in the Olds and the Galaxie), Ctrl-K means kick the radio (to turn it on; required with the Comet and the VW), and Alt-K means kick yourself (for buying the car; all models).

There is also a keystroke that randomly generates a curse that would make a sailor blush, which can be extremely useful at times. For instance, the real '65 Ford pickup wouldn't go into third gear unless, while shifting, you called it certain names that the publisher says I can't mention here because this is a family magazine. (Personally, I disagree; *my* family certainly doesn't read it.) Anyway, to get the simulated version into third you have to push the Shift (for "shift") and C (for "cuss") keys simultaneously.

The scenery for *Lemon Emulator* was also chosen to provide those with Big Bucks a chance to drive in a part of the country with which they're probably unfamiliar. The main program includes New Hampshire and features some classic stretches of state highway, faithfully recreated right down to every frost heave, pothole, and speed trap. You can also choose from any of the four New Hampshire driving seasons: Snow, Mud, Tourists, and Snow. The northern Maine and West Virginia scenery disks should be available by the time you read this.

Another nice feature is the ability to choose between day or night driving, although I wouldn't recommend driving most of these clunkers at night because of various problems with headlights, instrument lights, and having anywhere to go. The '65 Ford, however, *must* be driven at night because it doesn't have an inspection sticker and the plates have expired.

My program also includes support for all the major sound boards, so the user can round out the total driving experience with the symphony of sounds that accompany these vehicles. The perforated mufflers, the dragging tailpipes, the clinking of beer bottles on the floor of the back seat—every rattle, ping, clunk, crash, chatter, and gazorp has been authentically reproduced on the sound track. (Actually, only the vee-dub was capable of making the "gazorp" sound, and it only made it once. I think it's a German noise meaning "kaboom.")

Sure, I know I'm aiming at a much smaller market than the publishers of the dream car simulators and that I'll never sell as many games as they will. The fact is, I don't have to—each copy sells for $995. Only a limited number of copies will be made, and they'll be sold exclusively in places like Nieman-Marcus and Bloomingdale's. I also don't have to worry about copy protection, because the kind of people who would play this game would never consider not paying for it. ***—Bud Sadler***

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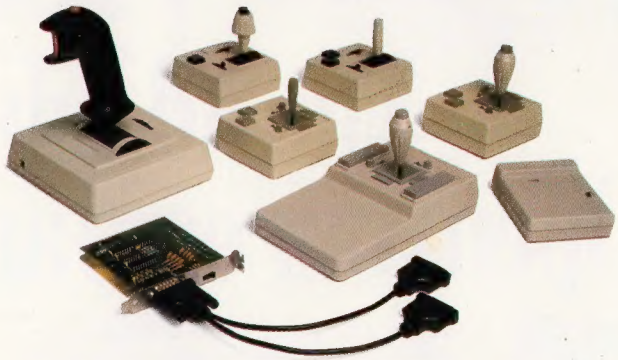

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